SULTANATE OF OMAN
MINISTRY OF EDUCATION

THE NEW ZEALAND
EDUCATION CONSORTIUM

Evaluation of the Sultanate of Oman Education System

(Grades 1-12)

Jointly prepared by the Ministry of Education
and the New Zealand Education Consortium

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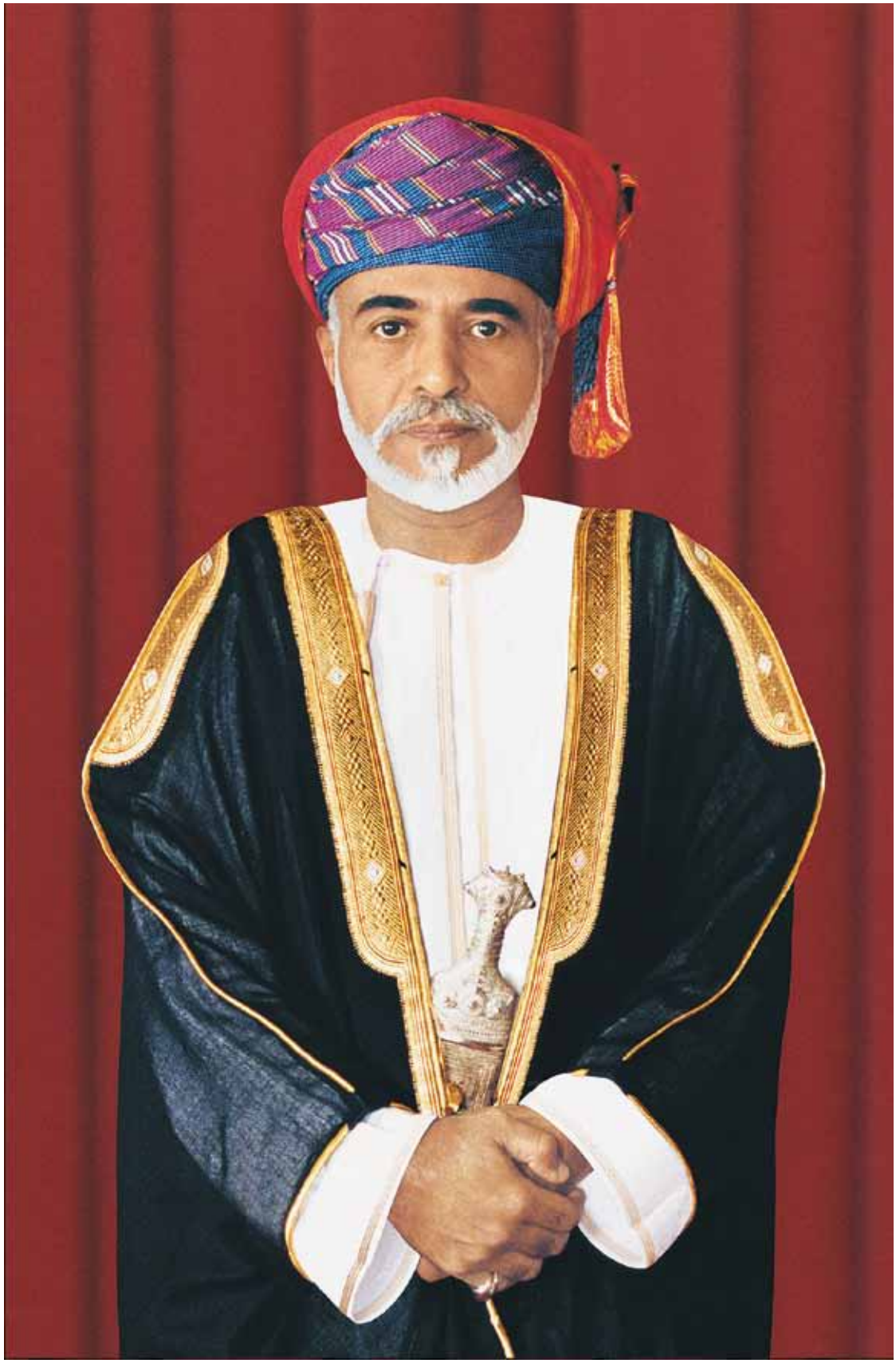
Consortium partners:

maven uniservices THE UNIVERSITY OF AUCKLAND NEW ZEALAND Te Whare Wānanga o Tāmaki Makaurau cognition education

HIS MAJESTY
SULTAN QABOOS
BIN SAID



Foreword of Her Excellency the Minister of Education

A number of international reports have drawn attention to the significant achievements made in education in the Sultanate of Oman over the last four decades. These achievements have included high enrolment and school completion rates, low repetition and drop-out rates, gender equality and rising literacy levels.

The Ministry of Education realises that it must move beyond merely ensuring access to education, and must concentrate on developing an education system that delivers high quality learning outcomes. The learning we provide for our students must be comparable to the best in the world because, in the globalised world in which we all now live, our students need to possess the high knowledge-based skill and competency levels that will enable them to compete internationally.

It is important that the reforms we introduce are based on evidence of what constitutes best international practice. The Ministry has, therefore, cooperated with international organisations in conducting a number of research studies into a variety of aspects of the school education system in Oman. The Ministry has analysed the advice and recommendations emanating from these studies, and has evaluated a wide range of international reports to seek guidance on how to achieve educational quality.

In his speech to the Council of Oman in 2011, His Majesty Sultan Qaboos bin Said ordered a comprehensive evaluation of the educational process in the country. In response to this, the Ministry in cooperation with a New Zealand Consortium launched a comprehensive review of the Sultanate's school education system. The resulting report, 'Evaluation of the Education System (Grades 1-12)', reflects the current state of Oman's school education system through a number of topics: student learning, teachers, school culture, curriculum, assessment, governance, management and financial affairs.

I would like to extend my sincere thanks and appreciation to the team - consisting of experts from the New Zealand Consortium and specialists from the Ministry of Education - responsible for preparing this study. I feel certain that the recommendations contained in the study will offer considerable guidance to the Ministry in its efforts to improve educational outcomes in the Sultanate, and in helping to prepare our students for active participation in our globalised world.

We ask Allah Almighty to grant us success for the benefit of our dear country and it loyal people.

Madiha Ahmed Al-Shaibani

Minister of Education
Sultanate of Oman

CONTENTS

ACKNOWLEDGEMENT

The New Zealand Consortium is pleased to be able to present this Report to the Minister of Education, Her Excellency Dr. Madiha Ahmed Al-Shaibani. This comprehensive review of Oman's Education System for Grades 1 to 12 does more than research the current state of G1-12 education in the Sultanate of Oman. It also captures part of the great story of extraordinary progress that has been made by Oman with its education system in the past 40 years, which every Omani should be justifiably proud of. Thank you Dr. Madiha for this opportunity. It has been the New Zealand's Consortium's privilege to add a small part to this brilliant story of success.

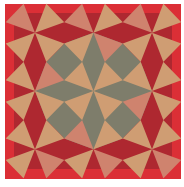
The Consortium would like to thank her Excellency for the work of her officials on this project and in particular the support and guidance given by the Project Supervisory Committee, ably lead by HE Dr. Hamood bin Khalfan Al Harthy. The Committee's discussion and advice was always forthright and frank and this allowed the Project Team to ensure focus was always in the right direction.

The New Zealand Consortium would also like to acknowledge the continuing hard work and commitment given to our international team by the Omani Technical Team. Guided by Mrs Janaitoo Al Lamki and led by Dr. Rashid Ahmed Al Hafsi, their tireless, patience willingness and professionalism to work with us to achieve the desired outcomes was essential to the completion of this project.

The Consortium would also like to give acknowledgment to all of the members of the Omani Technical Team for their intellectual insight, experience and technical expertise on this project. Thanks also to the Omani Team, for the kindness, warmth and generosity, freely given, in welcoming our International team members to Oman.

As well the Project Team were ably supported by a dedicated team of translators and administration staff both within the Project Office and within the Ministry itself. Our thanks to them as well.

Finally, we are sure that the close ties that exist between New Zealand and Oman have been strengthened through this project and it will be a sound basis for continuing to forge this cherished connection.



Interviewees

The New Zealand Consortium acknowledges the following Ministry of Education staff that were formally interviewed by the Evaluation Project Team in the third phase of the project in September, October and November 2013;
Mansoor Hamed Mansoor Al Sheali, Zainah Saoud Ali Al Abri, Najma Mahmood Al Zadjali, Ahmed Nasser Salim Al Nabri, Yahya Suliman Saif Al Jahwari, Mahfodha Mohammed Al Wehaibi, Asia Hamdan Mohammed Al Siyabi, Lamise Abbas Al Bahrani, Ahmed Ibrahim Mubarak Al Maimani, Fathiya Al Mawali, Nasser Said Al Anbor, Ahmed Mohammed Abdan Al Hinaai, Muneer Moosa Sadiq, Dr. Rashid Ahmed Al Hafsi, Humood Suliman Saif Al Rumhi, Badriya Rashid Ali Alhadi, Asria Naser Ali Al Akhzami, Muneerah Bint Abdullah Bin Zaher Al-Hinaei, Hamad Humaid Towair Al-Hatmi, Zakia Said Al Ghafri, Salim Abdullah Al Harthi, Sulaiem Shaneen Sulaiem Alyaqoobi, Said Hamood Amer Al Talei, Ali Saif Al Gahwari, Said Al Zadjali, Hilal Abdullah Salim Al Ghafri, Nasser Mohammed Saood Al Toubi, Said Sultan Al Bahri, Yusuf Moosa Al Bakri, Mabarek Salem Al Siabi, Hamed Said Suliman Al Rhabi, Salwa Saif Ali Al Qaassabi, Habib Hamood Suleem Al Dhafri, Safia Naser Said Al Mahrooki, Naser Mohamed Al Tobi, Rashid Said Al Alawi, Majdi Juma Saif Al Za'abi, Suliman Zaher Hamad Al Ruaishdi, Abdullmalik Yhya Al Qarni, Mohammed Mahmood Ahmed Al Saleh, Mohammed Ibrahim Al Bahri, Iman Mohammed Masoud Al Rajhi, Dr. Nasser Salim Nasser Al Ghanbosi, Zakarya Yhyia Suliman Al Rumhi, Marayam Mohammed Al Ryami, D. Ahmed Mohammed Al Shaily, Mhammed Said Ahmed Al Na'abi, Salim Said Salim Al Harthy, and Aflah Ahmed Al Kindi.

Stakeholder Organisations

The New Zealand Consortium would like to acknowledge the following that provide representatives for discussion briefings, interviews and/or focus group meetings; Majlis Al-Dawlah Education Committee, Majlis Al Shura Education Committee, Education Council, Ministry of Higher Education, Ministry of Manpower, Chamber of Commerce, Omantel, PDO (Petroleum Development Oman), Sultan Qaboos University, Sohar University.

Ministry of Education Briefings

The New Zealand Consortium would like to acknowledge the following Ministry of Education staff that provided briefings to the Evaluation Project Team in the initial phase of the project in February and March 2013;

Fatma Abdul Abbas Al Norani, Ahmed Adbullah Fadhil Al Ajmi, Seham Ahmed Said Al Ryami, Sadiqah AbdulMajeed Abdullah Al Lawati, Khadija Nasser Homood Al Tai, Fathiya Mohammed Abdullah Al Awasi, Fatma Abdulhussain Fadhil, Khalifa Jumah Essa Al Bulushi, Abdul Aziz Haidar Hamood Al Rawahi, Fahad Hamed Mohammed Al Esmaili, Hamed Essa Hamed AlSheaili, Hesham Sharaf Ali Al Musawi, Yaqoob Abullah Salim Al Subhi, Khalid Musallam Mohammed Al Ruzaqi, Ali Marhoon Rashid Al Nabi, Fatma Suliman Abdullah Al Zadjali, Othman Al Qasmi, Yaqoob Shair Mohammed Redha Al Zadjali, Musabah Said Mohammed Al Badri, Majid Nasser Said Al Mahrooqi, Khalaf Saleh Ali Al Mawali, Said Salim Al Busafi, Ibrahim Said Al Kalbani, Abdullah Salim Alhashmi, Mohammed Mossa Jafar Al Lawati, Ahmed Nasser Khalfan Al Jardani, Saleh

Harib Al Habsi, Mahfoodh Hamed Al Rawahi, Yousif Darwish Al Malahi, Bader Rashid Said Al Farsi, Hassan Suliman Said Al Mujani, Ismail Hemyar Mohammed Al Rashdi, Ahmed Al Mahrooqi, Nasser Ali Saleem Al Khyari, Salim Mohammed Shamis Al Nabhani, Saif Hamed Khalfan Al Abdali, Masoud Abdullah Awad Al Tubi, Said Ali Hammed Al Mahroqi, Ahmed mohammed Ali Al Azri, Suliman Mohamed Suliman Al Harasi, Saif Said Suliman Al Haji, Al Waleed Khalid Al Sulimani, Said Mohammed Salim Al Riyami, Mahmood Yousif Al Azri, Adil Masoud Zaher Al Ryami, Suliman Saif Al Kindi, Mahmood Saleh Mohammed Al Ajmi, Ali Mussa Ali Al Lahsani, Hamed Masoud Al Khyari, Reyadh Said Salim Salhi, Aisha Sultan Al Sinani, Badriya Khalfan Al Hadhrami, Rabab Jafar Al Ajmi, Sharifa Salim Al Kharosi, Amer Ali Al Sharji, Mohammed Said Saif Al lahsani, Said Nasser Al Hatmi, AbdulJalil Al Mindhiri, Khalfan Suliman Hanai, Ali Talib Al Bulushi, Azza Homood Mohammed Al Harthy, Safa Ibrahim Al Hanai, Sultan Mohammed Rashid Al kindi, Mohammed Ibrahim Suliman Al Bahri, Ali Jumah Ali Al Rasbi, Said Nasser Al Hashmi, Al Waleed Said Sinan Al Ahanai, Thuraya Hammed Hilal Al Rashdi, Ahmed Mohammed Ali Al bulushi, Masooma Talib Mohammed Al Lawati, Dr. Salim Ali Atef, Ghazi Mohammed Ali, Mohammed Saliyem Hammed Al Yaqobi, Khalid Saleem Rashid Al Shaqsi, Bader Suliman Homood Al Harthy, Said Ahmed Al Zadjali, Mohammed Said, Waleed Talib Al Hashmi, Bader Khalfan Salim Al Rashi, Abdullah Yousif Ibrahim Al Rawahi, and Ahmed Khalifa Saif Al Bahri.

School Visits

The New Zealand Consortium acknowledges and thanks the following schools that participated in the Evaluation Project, either as part of the self evaluation pilots conducted in March, April and May 2013 or as participants in the online surveys and/or school visits in September and October 2013;

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(Grade 1–4), Hai Al Nahdha (Grade 1–4), Um Kulthoom Bint Uqbah (Grade 5–10), A' Shirs (Grade 1–10), Umm Habeebah (Grade 11–12), Humood Bin Azzan (Grade 5-10), Humood Bin Azzan (Grade 5-12), Asma Bint Alnuaman (Grade 5–10), Al Huda (Grade 1–4), Mawalah Bin Shams (Grade 5–12), Almaalem (Grade 1–4), Tanuof (Grade 1–10), Alain (Grade 11–12), Al Haoraa (Grade 5–10), Al Emam Mohamed Bin Abdullah Al Kalili (Grade 9–10), Borket Al Mooz (Grade 1–4), Abdullah Bin Masaood (Grade 5–10), Aysha Umm Al Muamnin (Grade 11-12), Abu Qutadah Al Ansari (Grade 5–12), Saleh Bin Al Mutawkel (Grade 5-10), Al Fayha (Grade 1–4), Al Shek Mohammed Bin Omar (Grade 5–12), Seeh Al Maashi (Grade 1–12), Soor Bahla (Grade 1–4), Al Hareth Bin Malek (Grade 5–10), Al Shik Majed Bin Khmis (Grade 10–12), Al Qaryatain (Grade 1–10), Umm Al Kaier (Grade 10-12), Izki (Grade 1–4), Manbar Al Aalam (Grade 1–4), Khalid Bin Al-Waleed (Grade 5–10), Belad Sur (Grade 5–10), Al Bahja (Grade 1–4), Qalhat (Grade 1–9), Sur (Grade 1–4), Alkhansa (Grade 11–12), Hawager (Grade 5–12), Wade Biney Jabber (Grade 1–12), Aljel Alsaed (Grade 1–5), Abdullah Bin Jobeer (Grade 5–12), Hashame Bin Alaise (Grade 5–12), Aseelah (Grade 1–12), Saeeh Alulaa (Grade 1–4), Wade Aljahela (Grade 5–12), Abdel Rahman Bin Abi Bakr (Grade 8–9), Al-Albab (Grade 1-4), Sinaw (Grade 5–12), Al-Khadhraa (Grade 1–12), ALAzhar Bin Ali (Grade 5–12), Samad (Grade 7–12), Ous Bin Al-Samit (Grade 5–12) , Al-Aflaj (Grade 1–12), Al-Gize (Grade 1–12), Seih Al Nama (Grade 1–4), Al Naba (Grade 5–12), Al Salah (Grade 1–4), Al Qabil (Grade 1–4), Azan Bin Quis (Grade 11–12), Memonh Bint Harith (Grade 5–10), Sawdah Um Al Momneen (Grade 5–12), Bat (Grade 1–10), Salman Al Farsi (Grade 5–12), Al Hayal (Grade 1–10), Al Ruhbah (Grade 1–10), Alvia Basic (Grade 1–10), Roudh Oman (Grade 1–12), Falaj Al Sudyreen (Grade 1–10), Al Sawader (Grade 1–4), Tareq Bin Zeyad (Grade 11–12), Abu Thar Al Ghafari (Grade 5–12), Al Romaila (Grade 5–10), Naba Al Marefa (Grade 1–4), Alsaidyah (Grade 11–12), Al-Ajyaal (Grade 1–4), Mohammed Bin Al-Qasim Al-Thaqafi (Grade 5-10), Al-Saadah (Grade 10-12), Al-Qoof (Grade 1–4), Al-Marifah (Grade 1–4), Salalah Al-Gharbiah (Grade 1-4), Teetam (Grade 1–12), Khawlah Bint Hakeem (Grade 11–12), Jabir Bin Hayyan (Grade 5–12), Thumryt (Grade 5–12), Your (Grade 1–10), Heteen (Grade 5–12), Madainat Al-Haq (Grade 5–12), Sadah (Grade 5-12), Sadah (Grade 1–4), Dahaq Dree (Grade 5–10), Al-Mashash (Grade 1–12), Al Wesuta, Bahr Al-Arab (Grade 5–12), Raas Madrakah (Grade 1–12), Khasab (Grade 1–4), Musanadam (Grade 11–12), Qiroon Hirty (Grade 5–10), Al Naeem (Grade 1–4), Madinet Al Haq (Grade 1–12), Salalah (Grade 11–12), Abubakr Al Razi Basic (Grade 5–10), Majan Basic (Grade 1–4), Wadi Bani Jabir (Grade 1–12), Ahmed Bin Majid Post Basic Boys, Fatima Bint Al Khatab (Grade 5–10), Wadi Mahram (Grade 1–12), Abu Obaid (Grade 11–12), Sarh Almare (Grade 1–4), Amnah Bint Al Imam Jabir Bin Zaid (Grade 11–12), Hafsa Bint Sereene (Grade 5–10), Al Juwaif Basic (Grade 1–4), Yazid Bin Al Muhalab (Grade 5–12), Um Salmah (Grade 11–12), Jbn Sina (Grade 5–10), Al Yarmook (Grade 1–12), Mahoot (Grade 5–10), Duqm (Grade 1–12), A'Noor (Grade 1–4), Dhar (Grade 1–12), Shamsa'a (Grade 5–10), Sufanah Bin Hatim (Grade 1–12).

ACRONYMS AND ABBREVIATIONS

BAU	Business As Usual
BYOD	Bring Your Own Devices
CAPI	Computer Assisted Personal Interviewing
CAS	Colleges of Applied Sciences
CfBT	Centre for British Teachers
CREATE	Consortium for Research on Educational Access, Transitions and Equity
CSR	Comprehensive School Reform
ECC	Early Childhood Care
EFA	Education For All
EPMO	Enterprise Programme Management Office
ERO	Education Review Office (New Zealand)
FMIS	Financial Management Information System
G1-12	Grades 1 to 12 (or parts thereof i.e. G1 to 4 or G5 to 12)
G20	20 major world economies
GCC	Gulf Co-operation Council
GDP	Gross Domestic Product
HEAC	Higher Education Admission Centre
HMIE	Her Majesty's Inspectorate of Education (Scotland)
HR	Human Resources
HRD	Human Resource Development
ICT	Information and Communications Technology
ILO	International Labour Organisation
IT	Information Technology
KPI	Key Performance Indicator
MDG	Millennium Development Goals
MENA	Middle East and North Africa
MoCI	Ministry of Commerce and Industry
MOM	Ministry of Manpower
NCGC	National Career Guidance Centre
NFER	National Foundation for Educational Research
NZCER	New Zealand Council for Education Research
NZIER	New Zealand Institute of Economic Research
OAAA	Oman Academic Accreditation Authority
OECD	Organisation for Economic Co-operation and Development
OMR	Omani Rials
ONA	Oman New Agency
PIRLS	Progress in International Reading Literacy Study
PISA	Program for International Student Assessment
PLT	Principal Leadership Training
PMO	Ministry of Education Project Management Office
PPP	Purchasing Power Parity. A technique used to determine relative currency values
RFP	Request for Proposal
RO	Omani Rials
SBM	School Based Management
SL	School Leaders
SME	Small and Medium Enterprises
SQU	Sultan Qaboos University
STR	Student to teacher ratios
TESOL	Teaching English to Speakers of Other Languages
TIMSS	Trends in International Maths and Science
TOR	Terms of Reference
TVET	Technical and Vocational Education
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund; an earlier official name was United Nations International Children's Emergency Fund
USD	United States Dollars
WB	World Bank

DISCLAIMER

The New Zealand Education Consortium has accepted in good faith that the data and materials provided by Omani officials are a true and accurate record of the current practices in the Oman education sector. The Consortium has completed the report on the understanding that the Ministry of Education has provided all documents and data relevant to the aspects set out in the Evaluation Project Terms of Reference.

The Education Consortium has attempted to make the information within this report as accurate as possible and has made every effort to ensure the integrity and veracity of the information, data and resources captured and quoted.

The analysis provided in this section of the report is based on the information provided and gathered during the project. All attempts have been made to ensure that the examples used are evidentially based. It should also be noted that during the data collection phase of the project, teachers took nationwide industrial action that precluded the Consortium from completing the planned number of schools interviews and school evaluation activities.

The findings set out in this report that relate solely to data collected from school visit activities have taken into consideration any limitations arising from the reduced number of school visits. Although the Consortium was unable to complete its planned number of school visits, it is confident that the collected data meets appropriate scientific research standards.

DIAGRAMS AND TABLES

Chapter 1 Overview

Chapter 2 Findings & Recommended Actions

Chapter 3 Implementation Plan

Chapter 4 Governance & Administration

Chapter 5 Finance

Chapter 6 Approach to Evaluation of Educational Aspects

Chapter 7 Student Learning

Chapter 8 Teachers

Chapter 9 School Culture

Chapter 10 Curriculum and Assessment

Chapter 11 Relevance

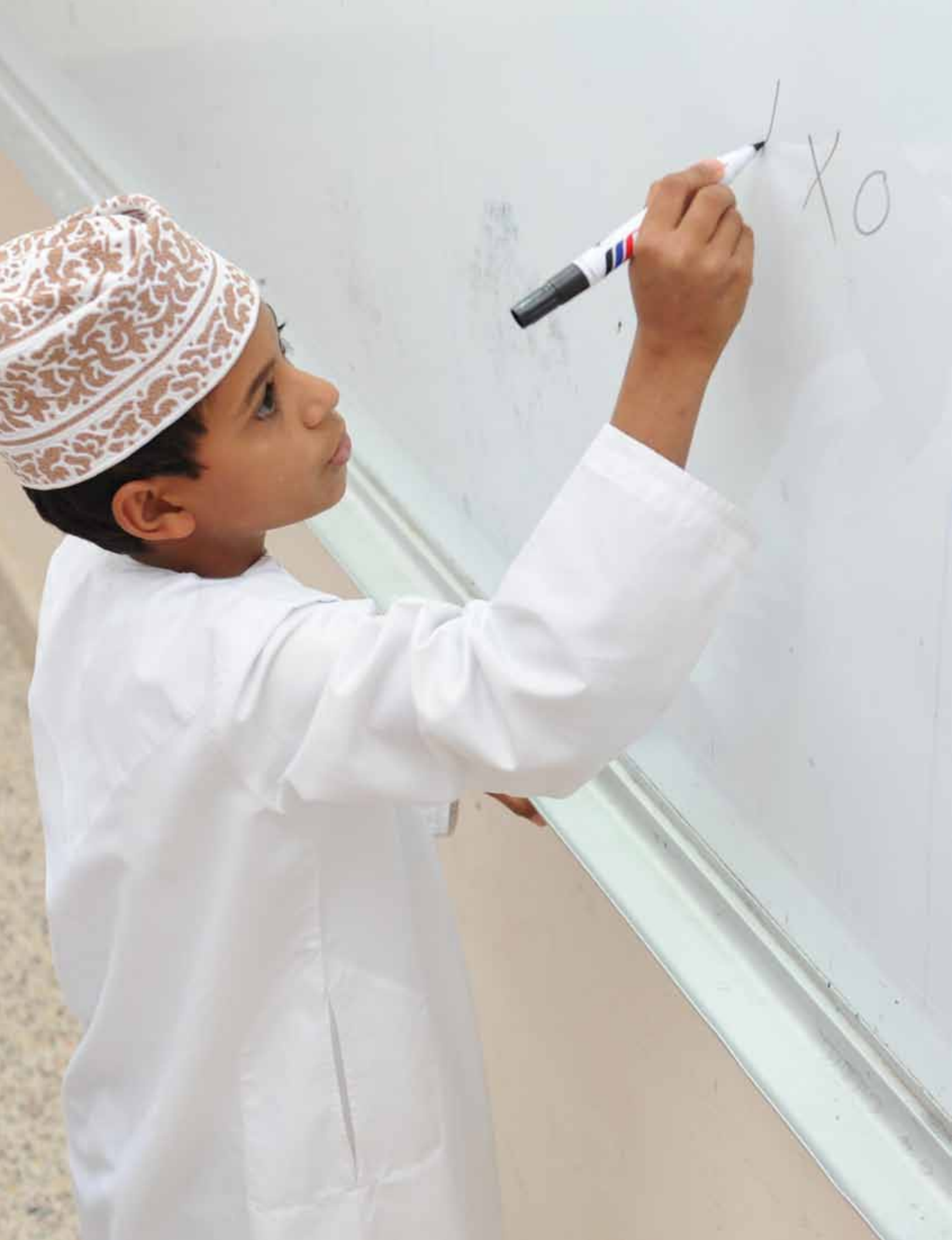
Chapter 12 Education Infrastructure

Chapter 13 Aspect Evaluation Methodology

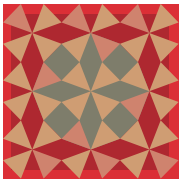

الوظيفة الأساسية للمجهر هي
عدد المكونات الأساسية للمجهر
ضع دائرة حول الإجابة الصحيحة فيما يلي
قوة التكبير للمجهر الضوئي تساوي
أ) ١٠٠٠ مرة
ب)
ج) ٣٠٠٠ مرة

SECTION 1

EVALUATION & FINDINGS RECOMMENDATIONS



CHAPTER 1
OVERVIEW



The Terms of Reference for the Ministry of Education Evaluation of the Education System (Grades 1-12) set out the following rationale for the project:

"As education is the basic pillar of progress and development it is necessary to conduct a comprehensive assessment of the educational march in order to achieve our aspirations and benefit from the available job opportunities in the public and private sectors."

His Majesty Sultan Qaboos bin Said

As the speech of HM Sultan Qaboos makes clear, the educational system needs to be regularly evaluated to determine if the intended outcomes are being achieved. Moreover, the pressure of change means that the Ministry must continually adapt and improve in order to meet the expectations of its stakeholders.

Introduction and Context

The purpose of this report is to provide a comprehensive evaluation of Oman's education system, and provide insight to inform how the education system can develop in the future. The Sultanate of Oman has transformed its education system over the previous 40 years under the reign of His Majesty Sultan Qaboos bin Said. High levels of public investment, rapid expansion of schools across Oman, and major growth in the education labour force, has seen the education system evolve from one of poor infrastructure, professionalism and inaccessible to one of high participation. Oman is seen as a leader in education reforms in the region. Oman has achieved parity with, and is leading in some, education standards and achievements when measured against the Gulf Cooperation Council Countries.

The significant efforts to lift the accessibility of education are now in the process of being matched with investment in the quality of the education being delivered. His Majesty Sultan Qaboos bin Said has articulated the need for education to drive social and economic progress for the Sultanate of Oman, which will be necessary for Oman to develop globalised citizens in an increasingly connected world. In order to achieve on going economic success, and retain the unique Oman identity, the education system needs to act as a foundation for future leaders and continue to reinforce Islamic principles and provide the necessary critical thinking and development skills to allow every Omani to fulfil their potential.

The system review is timely, as the Ministry of Education is implementing a broad range of education initiatives, drawing upon international best practice. Given the scale and complexities of the education system, which serves over 500,000 children, and employs over 80,000 teachers and officials, the evaluation will assist system leaders in ensuring that planned investment will result in lifting the quality and educational achievement of Omanis. This will position the Sultanate of Oman well for the global challenges to come.

The New Zealand Consortium draws from experience of New Zealand education reforms that were undertaken from the mid 1980s to 2000s. These reforms are now at a stage of maturity that has resulted in the New Zealand education system being highly ranked globally. New Zealand shares many of the same cultural values and educational aspirations as the Sultanate of Oman and similar demographics in terms of population size and economic growth. This affinity between the two nations resulted in a positive model of collaboration, which has enabled the Consortium access and insight into all areas of the education system, from the classroom to the Minister's office. The unprecedented nature of the project, in terms of the scale of data collected, interviews conducted with a broad range of stakeholders, and concurrent capability building with Ministry of Education officials has resulted in a system evaluation that accurately reflects the current state of the Oman education system. It also provides a resource to assist decision-makers in charting a sustainable way forward for Oman's education system in the future.

1.1 Project Terms of Reference

1.1.1 Rationale

The previous forty years have seen major education reforms in Oman, inspired by the high value placed by His Majesty Sultan Qaboos bin Said on education as a fundamental contributor to society, the economy, and the quality of lives of Omani citizens. Commencing in 1970, the first wave of the reforms resulted in significant investment in school infrastructure, increasing the access and participation in education from 3478 to 516,891.

The second wave of the reforms focussed on shifts towards a more sustainable system, and linked with broader policy initiatives such as the Omanisation policy in 1988, resulted in a significant increase in teacher training and professional development. Omanis now make up approximately 90% of the teaching workforce (Ministry of Education, 2012b). The first two waves of the reforms focussed on inputs, that is, ensuring that the infrastructure and labour force needed to deliver education was in place.

Omanis now make up approximately 90% of the teaching workforce

The third wave of reform, which is currently underway, is more focussed on outcomes of the system, and in particular on lifting quality and coherence within the education system. Reforms have included the introduction of the Basic and Post Basic Education system, the introduction of new curricular and assessment settings and the increasing participation of Oman in international education system measures. All of these reforms have contributed to an increased focus on the education system producing well-rounded Omanis who are well prepared to contribute to their communities and the global workplace, and are able to fulfil their individual potential.

Although there has been a significant increase in the investment and subsequent inputs of the education system, the Oman education system is still challenged by low educational achievement when measured internationally. The complex nature of the system, both in terms of the size and scale of the system, and disparate views on educational pedagogy suitable to an Omani context, can make it difficult to assess how the system is performing, the impacts of initiatives, and for system-leaders, to take well-informed decisions to achieve improvements in quality.

An evaluation of the education system is timely as it allows for the collective reforms completed to date to be assessed in terms of impacts upon the system and outcomes, and against international standards and practices. The partnership model between an international firm and the Oman Ministry of Education has resulted in an independent quantitative analysis of system components, and a high level of access to key stakeholders and resources necessary to undertake qualitative analysis.

By undertaking a comprehensive review, the New Zealand Consortium in partnership with the Oman Ministry of Education has been able to identify key drivers and influencers of the education system in its current state, and also forecast the likely impacts from the planned initiatives. This enables system leaders to make well-informed decisions, factoring in how the system as a whole is likely to respond to changes, and continue to develop the education system within a changeable and dynamic environment.

1.1.2 Deliverables

The key deliverables of the project were:

- An evaluation of both Basic Education and Post Basic Education, across multiple aspects of the education system.
- Creation of a self appraisal framework, appropriate to the Omani context, to enable on going review and evaluation.
- Development of the skills of Ministry staff to enable them to evaluate the effectiveness of the education system.

In practical terms, the project deliverables include a matrix of enquiry and evaluative tool design; capability building in critical evaluation and assessment; quantitative and qualitative surveys to inform data collection and analysis; strategic and policy consultation; and the production of a comprehensive report providing a clear and concise understanding of the Oman education system dynamics.

1.1.3 Timeframe & Scope

The project team commenced work in January 2013 and completed the evaluation in December 2013. The broad scope of the project was to undertake an evaluation of Basic and Post Basic public education (grades one to twelve) with the aim of creating a sustainable self-appraisal framework, and providing capability building to Ministry of Education staff to enable regular systemic reviews that can assess the effectiveness of the education system in terms of return on investment and meeting the needs of students, parents, teachers, employers and other education stakeholders.

Specifically, the project team evaluated eight key aspects of the education system, defined within 38 detailed components. The eight broad aspects considered were:

Aspect	Components
1. Student Learning	Student performance Academic support Inclusive education Learning contact time
2. Teachers	Classroom effectiveness Workload Instructional support systems Subject supervision New teacher training and support Professional development Job satisfaction Accountabilities and incentives
3. School Culture	School effectiveness Supervisors Student regulations Parents and local community School support systems
4. Curriculum & Assessment	Scope and sequence Values School study plan Teaching and learning methodologies Assessment systems and practices Extra-curricular activities
5. Relevance	Labour market and higher education Entrepreneurship skills Soft skills
6. Infrastructure	School buildings and facilities School equipment School networks and internet
7. Governance and Administration	Philosophy of education Efficiency and capacity Monitoring and evaluation Policy development Organisational structure
8. Finance	Share of government budget Allocation of Ministry budget Cost per student

1.2 Evaluation Approach

1.2.1 Personnel

The New Zealand Consortium was comprised of 16 education, policy and finance experts who worked closely with 22 Ministry of Education Officials of the Technical Committee. Members of the Consortium and the Technical Committee operated as the 'Project Team', sharing office space, knowledge and information, and experiences. The Project Team conducted reciprocal capability building, with the Consortium members offering system expertise and evaluation advice, and Technical Committee members offering in depth knowledge of the Oman education system and wider Omani cultural principles and practices.

The Project Team conducted reciprocal capability building, with the Consortium members offering system expertise and evaluation advice, and Technical Committee members offering in depth knowledge of the Oman education system

The Project Team Leader reported regularly to a Supervisory Committee comprised of ten senior Ministry of Education officials. The Supervisory Committee provided governance to the project.

Refer to Appendix Two for further details about the Consortium, Technical Committee and Supervisory Committee members.

1.2.2 Evaluation of the System

Within systems thinking, the following features are defined:

- **Systems have structure:** A system is a set of related components that work together and perform processes and functions that are required to achieve the system's objective
- **Systems are goal seeking:** All systems will be trying to achieve a goal. The Oman education system is seeking to produce well educated Omanis to contribute to the social and economic prosperity of the Sultanate of Oman
- **Inputs:** Are the components or resources such as people, materials, energy, information, documentation or finance that are put into a system, process, project or activity. Within a system many inputs are prerequisite to decisions being made, further progress being made, further processes being implemented or other inputs being introduced. The Oman Ministry of Education has a complex set of inputs, including (but not limited to) central Ministry of Education inputs such as strategy, policy, infrastructure, curriculum, funding and resources. Governorate inputs such as human resources, training and development, and supervision. school inputs such as principals, teachers and facilities, and community inputs such as students and families.
- **Outputs:** Outputs are the product of the inputs once processes and functions have occurred. Education outputs include textbooks, schools open for student learning, and lessons delivered.

- **Outcomes:** Arise from the use of outputs. For example, teachers and students using textbooks in a lesson can achieve a learning outcome.
- **Interconnectivity:** The components of the system interconnect and transact through processes and functions. The connections between the components may be driven by structure, for example, a principal requiring approval from the Ministry of Education to close a school for a day; or could be driven by behaviour, for example, a teacher positively responding to motivators and building positive relationships with students.
- **Interdependence:** Components of a system, and systems themselves do not work in isolation. The way a system performs, and the outputs and outcomes it produces are highly reliant on interdependencies. Due to the dynamic nature of the Oman education system, the evaluation takes into account the co dependencies of the components and associated processes, and seeks to identify the parts of the system where performance could be improved to strengthen the desirable outcome of a well-educated society.

Diagram 1.1 G1-12 Education System

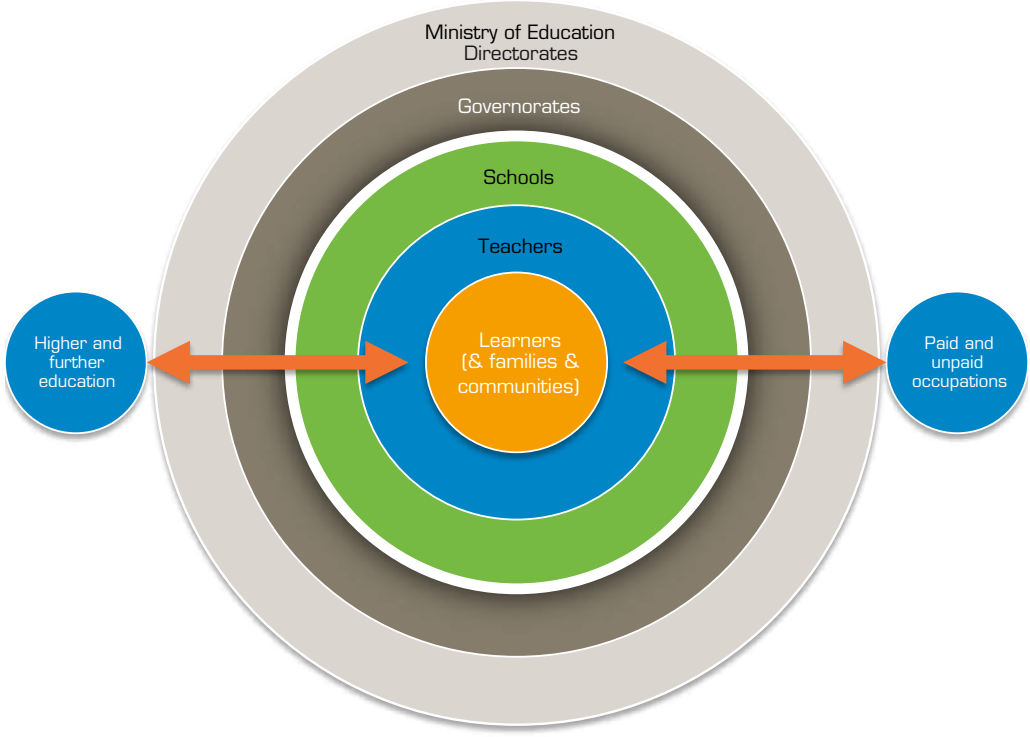
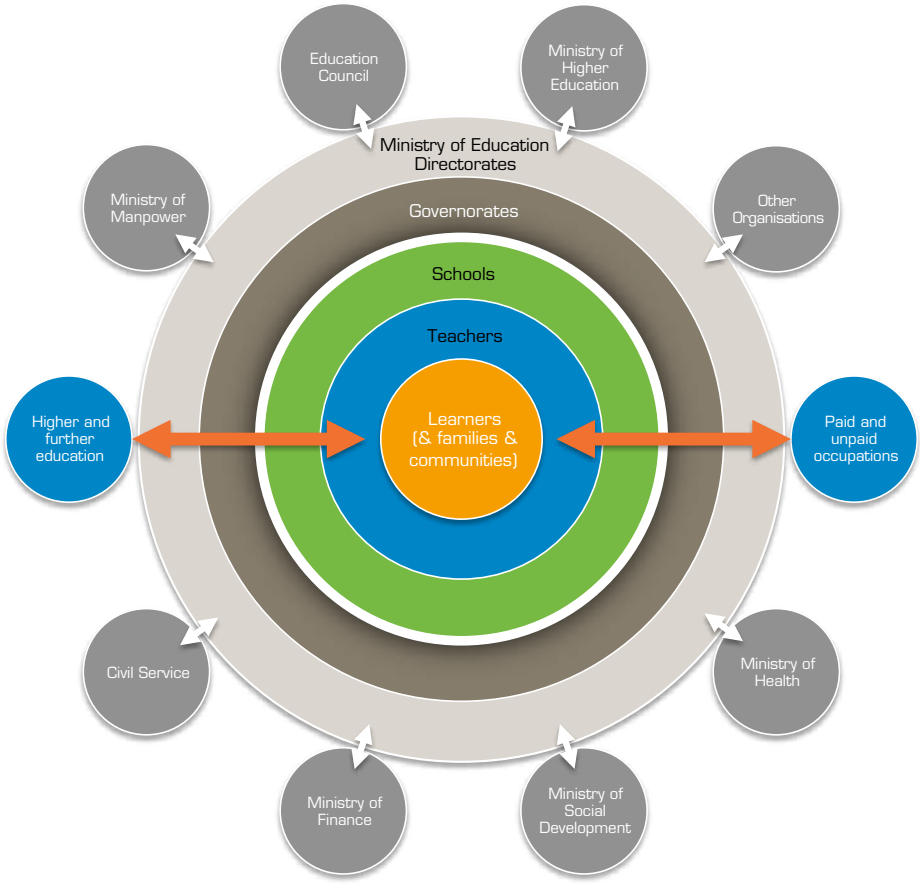


Diagram 1.2 **Part of a wider education and government system**



System Definitions

The report uses the following terms in describing and discussing the education system.

System leaders: People within the system that are able to influence the processes or behaviour of the system. This could include senior Ministry of Education officials who can influence a system through decision-making and policy setting; or principals who are able to influence the micro-system behaviour at their school.

System levers: Actions that can be taken that will result in a predictable change in behaviour of the system. For example, in a machine, where pulling a lever or pushing a button will result in a predictable action such as the machine starting or stopping. When an education system is well understood, system levers such as policy and processes can also result in predictable changes in the operation or behaviour of the system.

System policies: Rules and parameters within which a system operates System policies within the context of this report refers to known policies, such as strategy documents or guidelines, and undocumented policies or patterns of behaviour that may still guide how the system operates.

Operational policies: Rules and parameters within which individuals within the system operate.

1.2.3 Key System Evaluation Questions That Were Addressed

In order to provide an evaluation framework, within a complex education system, that could be replicated in future by the Ministry of Education, the project team focussed on three key questions. These questions provided the foundation for the review against the eight key aspects, and provided the foundation for capability building within the Ministry of Education. The questions were:

1. **Is the education system aware of the key issues and challenges it faces in achieving desired outcomes for learners?**

   The aspects of the education system were investigated by testing whether the components and participants in the system were aware of the system dynamics. This was in terms of the inputs, processes, functions, and outcomes, and whether the system was performing as anticipated. This approach also identified the system issues and challenges as they arose.

   To assess this, the document review critically assessed whether strategies, policies, and operational policies clearly articulated 'who', 'what', 'why', 'where' 'when' and 'how' of particular actions and demonstrated an awareness of how these actions would impact upon the system, both in terms of anticipated behaviour and the contribution to achieving educational outcomes.

   When conducting interviews and workshops with key stakeholders, evaluative questions were designed to provide qualitative data regarding whether individuals were aware of their role within the wider system and processes; their behaviour in terms of whether they were performing processes and functions as the system expected, and awareness of how their role was contributing to educational outcomes.

   Through quantitative data analysis of gathered and available statistics, recurring trends highlighted whether the system had responded as expected to system changes such as the introduction of new teaching methodologies or assessment processes.

   The Education Evaluation Project Team also considered how the available information and data has been utilised to provide feedback into the system, and how this impacted awareness of the key issues and challenges.

2. **Are the education system's responses to its key issues and challenges likely to result in desired outcomes for learners?**

   The Education Evaluation Project Team analysed whether historically the system had responded to changes as anticipated. If diverse behaviour was observed, the Education Evaluation Project Team sought to record how the performance of the system varied. Given previous system trends, both within the Oman education system and how other education systems have responded to changes, the Education Evaluation Project Team assessed whether actions that the Ministry of Education has put in place to address issues and challenges are likely to be effective.

   The Education Evaluation Project Team developed criteria to assess system responses for appropriateness, effectiveness and efficiency. System responses were informed fundamentally by whether proposed solutions were likely to work within the context of the Oman education system.

   Appropriateness was assessed by whether an action was strategically aligned to Ministry of Education aspirations; whether the actions could practically be implemented within the Oman education system and whether the action was likely to address the cause of a key issue or challenge. Effectiveness was assessed by considering whether an action had resulted, or is likely to

result, in the intended outcome. Efficiency was assessed by considering the return on investment of a particular action.

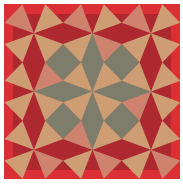
3. **Are there recommended additional system level responses that will improve the system's ability to achieve the desired outcomes for learners?**

   Once the Oman education system dynamics were understood, the project team was able to identify additional responses that may be more efficient, more effective, or more appropriate to affect a change in behaviour or system level improvement in educational achievement. Drawing on international examples of best practice, system levers that have been proven to lift educational achievement, regardless of cultural context, can be adapted to work within Omani education settings. The systems approach enabled the evaluation to highlight systemic issues, assess responses and provide additional recommendations that are aimed at improving system performance. This includes a higher level of awareness of causes of key issues and challenges, greater timeliness in identifying and responding to issues, or strengthening the feedback loop so that there is greater understanding of how the system is performing as a whole.

1.3 Overview of the Education Evaluation Report

This report is set out in three parts as outlined in the following table.

Part	Purpose	Chapters
PART ONE **Report Overview, Findings & Recommendations**	Provides the context of how the Omani education system is performing, summarises the key findings of the evaluation and proposes a course of action to strengthen educational outcomes	1. Overview of Evaluation Report & Project 2. Findings & Recommended Actions 3. Implementation Plan
PART TWO **Evaluation of the Governance, Administration & Finance Aspects**	Describes and assesses the key processes and functions that govern, manage and fund the Oman education system.	4. Governance & Administration 5. Finance
PART THREE **Evaluation of the Educational Aspects**	Describes and assesses the processes and functions that impact upon educational delivery and student achievement.	6. Approach To Evaluation of the Educational Aspects 7. Student Learning 8. Teachers 9. School Culture 10. Curriculum & Assessment 11. Relevance 12. Infrastructure 13. Aspect Evaluation Methodology 14. International Review of Approaches to School Evaluation

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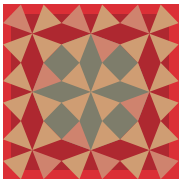
CHAPTER 2

FINDINGS & RECOMMENDED ACTIONS



The Terms of Reference for the Ministry of Education Evaluation of the Education System (Grades 1-12) set out the following deliverables for the project:

… to carry out an evaluation of both Basic Education and Post Basic Education (i.e. grades 1-12).

The final report at the end of the consultancy will include recommendations with responsibilities for taking forward, priority actions, detailed action plans with timings for their delivery, and procedures to promote sustainability.

Summary

The Consortium key findings are that the education system has a good level of self awareness of the issues and challenges that it faces in striving to achieve the desired outcomes for learners, however the causes of issues within the system, in some instances, are not clearly articulated or understood. The Consortium also finds that the education system responses already in place, and currently being implemented, to address these key challenges and issues, are in many cases both appropriate and based on international best practice.

The Consortium's finding is that the education system responses have the potential, if successfully implemented in a co ordinated manner, to ensure that the desired outcomes for learners are achieved. The Consortium has set out the five areas to be addressed to ensure that this potential for success, of the current system initiatives, is converted to actual success. The Consortium has provided the following recommended actions for each of the areas that requires attention.

	Area To Be Addressed	Recommended Action
1	Governance of major initiatives	Establish a Ministry of Education Project Management Unit (PMU)
2	Policy development	Reform the Ministry of Education Policy Development Process
3	Key performance indicators	Establish a Ministry of Education Data Management Strategy
4	Communication	Establish a Ministry of Education Communications Unit
5	Self evaluation	Implement a Self Evaluation Framework Pilot

If the recommended actions are initiated over the first half of the 2014 year all the major system initiatives currently being implemented will benefit from these recommended actions. This chapter sets out the rationale for each of the recommended actions and discusses factors that should be considered when implementing the recommended actions.

2.1 Findings

2.1.1 Introduction

National education systems are complex. There are many components to a national education system and a multitude of policies, operational policies and procedures, processes, and interactions contextualised to the country the system is operating in.

At any one time an evaluation of an education system will identify challenges and issues that the system is facing. While noting this, stakeholders have an expectation that their national education system will have processes in place to ensure that the system is capable of monitoring itself in order to identity issues and challenges and to formulate appropriate, effective and efficient responses to these challenges and issues.

This section sets out the Consortium's findings in relation to the self awareness and responsiveness of the Oman G1-12 education system.

At any one time an evaluation of an education system will identify challenges and issues that the system is facing.

2.1.2 System Self Awareness

Is the education system aware of the key issues and challenges it faces in achieving desired outcomes for learners?

Consortium finding:
Yes, the Oman education system displays a good level of self awareness.

The following table sets out the key challenges and issues identified by the Education Evaluation Project across the eight aspects of the Terms of Reference.

For each identified issue or challenge the Consortium has made an assessment of the system's awareness of the identified issue or challenge.

The level of the system's awareness of key challenges and issues was evaluated on a three- point scale (from 'no awareness' to 'fully aware'). A rating of 'fully aware' was assigned when the challenge or issue featured in system level documentation, such as the 8th Five Year Strategic Plan (2011-2015), publically available external or internal reviews and reports, or in policy documents being considered by Under Secretaries, Director General and Ministry committees. A rating of 'some awareness' was assigned when the challenge or issue featured in some components of the education system, but was not evident at the level of system decision making. A rating of 'some awareness' was also assigned if the full extent or understanding of the challenge or issue was not evident in system level documentation.

Aspect and chapter reference	Key Challenge/Issue Identified in the Education Evaluation Project/'	Level of Education System Awareness	Consortium's rating of the education systems response/s to the challenge/issue		
			Appropriate-ness rating	Effectiveness rating	Efficiency rating
Governance & Administ-ration Chapter 4	Overlapping lines of responsibility and accountability for policy development in the Ministry.	Fully aware	Not appropriate	Not effective	Not efficient
	Lack of system key performance indicators.	Some awareness	Partially appropriate	Not effective	Not efficient
Finance Chapter 5	Very limited financial reporting capability on output expenditure on education products and services and consequent lack of system financial key performance indicators. (At present there are financial control systems that track authorisations for how resources are spent. System leaders need systems that track how effectively the resources have been spent).	Fully aware	Partially appropriate	Partially effective	Mixed efficiency
Student Learning Chapter 7	Student achievement (against national and international indicators) is lower than desired.	Fully aware	Appropriate	Effective	Mixed efficiency
	Inflated within-country student performance results.	Some awareness	Partially appropriate	Partially effective	Not efficient
	Need for comprehensive training for staff working with special needs students, in particular for regular classroom teachers and special education teachers.	Fully aware	Partially appropriate	Partially effective	Not efficient
	School compliance with official student learning days.	Fully aware	Some awareness	Effective	Efficient
Teachers Chapter 8	The need to shift from outputs focused supervision practices to outcomes focused supervisory practices.	Some awareness	Appropriate	Likely to be effective	Mixed efficiency
	The need to raise the professional capability of the teaching workforce.	Some awareness	Appropriate	Likely to be effective	Efficient
	Wide variations in teacher workload.	Some awareness	Partially appropriate	Partially effective	Not efficient
	Negative narrative regarding the performance of teachers, salaries and benefits, and low levels of motivation through a lack of systematic recognition of teacher achievement.	Fully aware	Not appropriate	Not effective	Not efficient
School Culture Chapter 9	Need to shift administration and teaching practices from routine practice to adaptive practice (Routine practice is that which occurs repeatedly without alteration with the view that it is the 'right' way. Adaptive practice starts with a particular way of doing things and is constantly altered to improve the way it is done).	Some awareness	Appropriate	Partially effective	Not known
	Monitoring and managing student attendance.	Some awareness	Partially appropriate	Likely to be effective	Efficient
	Building and maintaining an effective engagement between schools, parents and communities.	Fully aware	Appropriate	Partially effective	Mixed efficiency

Aspect and chapter reference	Key Challenge/Issue Identified in the Education Evaluation Project/'	Level of Education System Awareness	Consortium's rating of the education systems response/s to the challenge/issue		
			Appropriate-ness rating	Effectiveness rating	Efficiency rating
Curriculum & Assessment Chapter 10	Developing the desired curriculum for Omani learners	Fully aware	Partially appropriate	Likely to be effective	Mixed efficiency
	Over crowded and inflexible curriculum	Some awareness	Appropriate	Likely to be effective	Not known
	Achieving the desired shift from a teacher centred to learner centred methodologies	Some awareness	Partially appropriate	Partially effective	Mixed efficiency
	Ensuring assessment matches the knowledge and skills specifications for students set out in the prescribed curriculum	Some awareness	Appropriate	Likely to be effective	Mixed efficiency
Relevance Chapter 11	School graduates do not meet stakeholder expectations in relation to the skills and knowledge required for higher education and the labour market	Fully aware	Appropriate	Likely to be effective	Not known
Infra-structure Chapter 12	Limited progress against several key building development projects (from 8th Five Year Strategic Plan (2011-2015)	Fully aware	Appropriate	Partially effective	Not efficient
	Difficulties that schools, teachers and learners face in relation to Internet access and receiving and maintaining IT devices to connect to the internet	Fully aware	Partially appropriate	Partially effective	Mixed efficiency

The system has significance levels of data and information on some of these challenges and issues and they are extensively documented in internal and external publications.

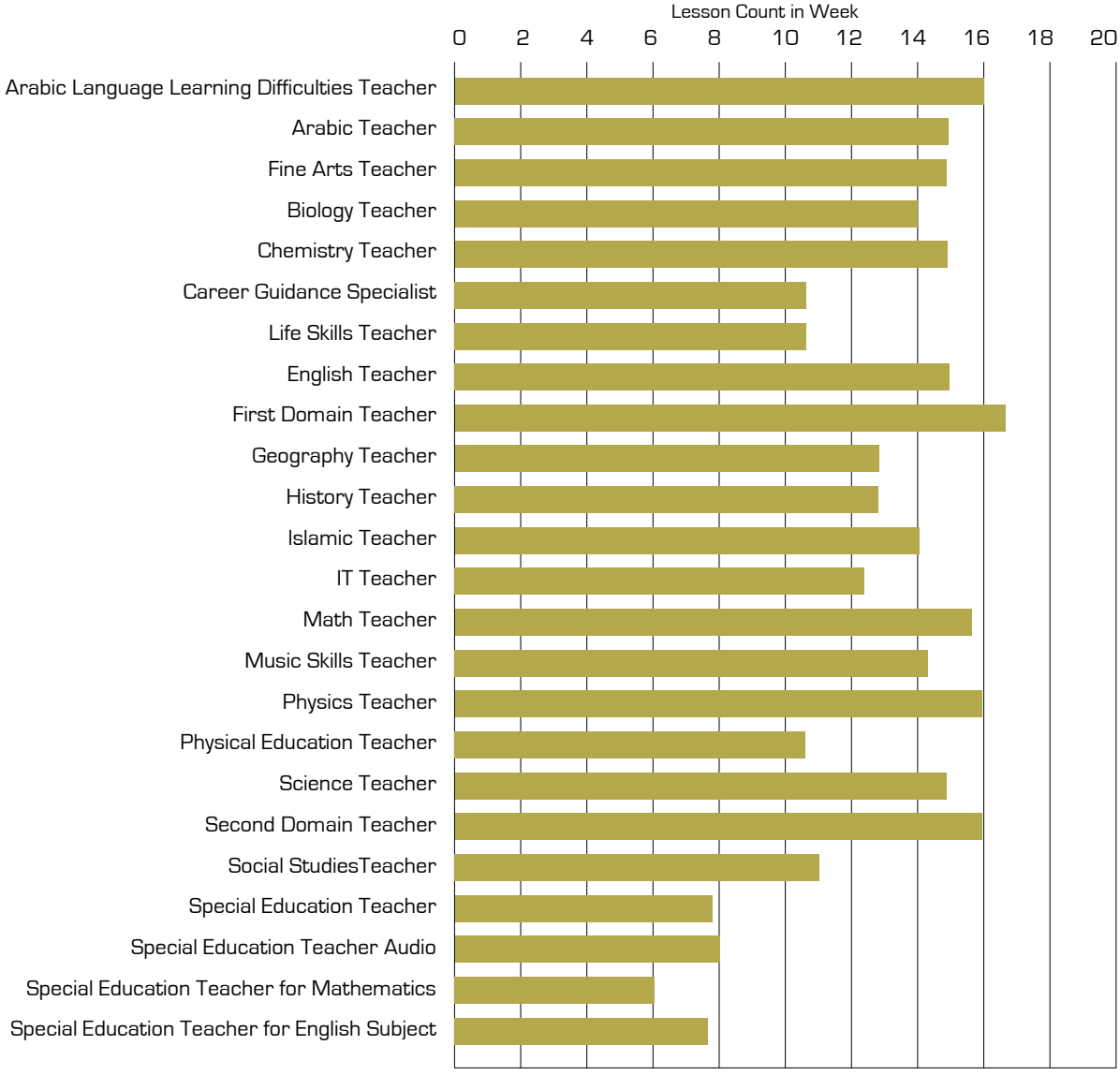
For example, the system has good data on the issue of school graduates not meeting stakeholder expectations in relation to the skills and knowledge required for higher education and the labour market. The following table from Chapter 12 Relevance sets out the statistics available within the education system on the annual number of recent school graduates requiring foundation learning before entry to Sultan Qaboos University graduate programmes.

Table 11.4 Statistics for new school graduate entering Sultan Qaboos University

Entrance Year	Number of new school graduates accepted	Number of new school graduates requiring foundation programme	% requiring foundation programme	% students not completing (includes withdawals)
2010	2,763	2,728	98.7%	4%
2011	3.124	3.081	98.6%	4.3%
2012	3.306	3.267	98.8%	Not available
2013	3.072	3.028	98.6%	Not available

In other cases the system shows only partial awareness of a particular challenge or issue that the system is facing. For example, the Consortium finds that the system has only a partial awareness of the wide variation in teacher workloads across the G1-12 education system. The following graph from Chapter 8 Teachers shows the variation in weekly allocated teaching time by job title.

Graph 8.15 **Average lesson count per week across job titles (excluding senior teachers) for 2012/2013**



This graph was generated from data supplied by the Ministry from the E-portal database system. While this data is available within the system the Consortium was unable to find evidence that this data had been analysed or considered in any part of the system.

Information on each challenge and issue is provided in the relevant chapters of this report.

2.1.3 System Responses

Are the education system's responses to its key issues and challenges likely to result in desired outcomes for learners?

Consortium finding: Potentially, yes

The table above setting out the key challenges and issues identified by the Education Evaluation Project across the eight aspects of the Terms of Reference also includes the Consortium assessment of the system response to each of the identified challenges and issues.

The Education Evaluation Project Team developed criteria to assess system responses for appropriateness, effectiveness and efficiency. System responses were assessed fundamentally by whether proposed solutions were likely to work within the context of the Oman education system.

The following Evaluative Criteria and Rating Scale was utilised in applying a rating to the system response (or combination of responses) to an identified challenge or issue.

Appropriateness: is an appropriate response being pursued?

The appropriateness of a response has been judged against how the Government of Oman, through the Ministry of Education, has committed and planned its response to an identified issue (as indicated in the 8th Five Year Strategic Plan (2011–2015) and/or other Ministry documentation).

Appropriateness rating scale: appropriate/partially appropriate /not appropriate.

Effectiveness: is the response being effectively implemented?

The effectiveness of a response has been judged against what the system's response is trying to achieve, the outputs and outcomes it is working towards, and whether or not they have been met. The response is rated as *effective* if the stated outputs and outcomes have occurred or are clearly on track to be achieved (i.e. it has worked). Effectiveness is rated as *partial* if some progress toward achievement has occurred, but obstructions have occurred because of the choice and development of inputs and processes being less than optimal. A response is *not effective* if there has been little or no progress in its performance and achievements, and there are no clear arrangements in place to help it improve. Effectiveness is *likely to be effective (if successfully implemented)* if a response has clear outputs and outcomes and inputs and implementation processes are well designed but it is too early to judge the response's progress.

Effectiveness rating scale: effective/partially effective/likely to be effective/not effective

Efficiency: Is the level of resource invested in the response appropriate, well-utilised and sustainable?

Efficiency is technically judged by means of a cost/benefit or cost/effectiveness analysis. In a cost-benefit analysis, the outcome is monetarily defined. In a cost-effectiveness analysis the outcomes is defined more broadly and focuses not just on cost but on how well the objectives have been met. These standard technical means of assessing efficiency do not work in this case as the cost data and other information needed is currently not available within the Oman education system. The Consortium therefore based its efficiency judgments on the information that was available to form a qualitative sense of the adequacy (or excessiveness) of the resources invested and the outcomes of the effectiveness ratings. Another factor here was the likelihood of the response being sustained within allocated resources.

If the response had clearly achieved its intended outputs and outcomes, and the evidence was that this had happened within the human, material and financial resources allocated, and that its continuation would be sustainable within allocated resources, it was deemed efficient. If it was partially effective and the costs were not unreasonable and probably could be sustained, the response could be judged as of mixed efficiency. If the response concerned had already been evaluated as not effective, then it was clearly not efficient, regardless of the cost in terms of human, material or financial resources or their sustainability. A fourth scale not known was applied when there was not sufficient information to form any judgment.

Efficiency rating scale: efficient/mixed efficiency/not efficient/not known

In a number of areas the systems response to an identified challenge or issue represents a major-change to the system. The following table sets out the key planned major initiatives.

Challenges and Issues Being Addressed	Oman Education System Response
Curriculum ■ Developing the desired curriculum for Omani learners. ■ Over crowded and inflexible curriculum. ■ Achieving the desired shift from a teacher centred to learner centred methodologies. ■ Ensuring assessment matches the knowledge and skills specifications for students set out in the prescribed curriculum. ■ School graduates do not meet stakeholder expectations in relation to the skills and knowledge required for higher education and the labour market. **Assessment** ■ Student achievement (against national and international indicators) is lower than desired. ■ Inflated within-country student performance results.	Curriculum Standards Project including development of: ■ Curriculum Framework document incorporating all school subjects and stages. ■ Assessment criteria. ■ Texts and activities. ■ Online resources. Implementation of a project to establish an Assessment Centre including: ■ Review of examination policies and procedures. ■ Development of assessment standards. ■ Development of an online assessment platform. ■ Development of a National Qualifications Framework. ■ Development of statistical analysis centre. Establishment of an Education Law that includes legislation covering: Standards and procedures for developing curriculum. Student learning and assessment.
Teachers ■ The need to raise the professional capability of the teaching workforce. ■ Negative narrative regarding the performance of teachers, salaries and benefits, and low levels of motivation through a lack of systematic recognition of teacher achievement. ■ The need to shift from outputs focused supervision practices to outcomes focused supervisory practices. **School Culture** ■ Need to shift administration and teaching practices from routine practice to adaptive practice. ■ Monitoring and managing student attendance. ■ Building and maintaining an effective engagement between schools, parents and communities.	Establishment of a Specialised Centre for Teacher Training. School Performance Evaluation Review. Establishment of an Education Law that includes legislation covering: ■ Administration and supervision. ■ Standards for teaching preparation and professional licensing. ■ Promotions. ■ Accountability. ■ Responsibilities – including integrity and conduct. ■ Professional development. ■ Supervision. ■ Education environment (student activities, school buildings, school funding).

Challenges and Issues Being Addressed	Oman Education System Response
Financial ■ Very limited financial reporting capability on output expenditure on education products and services and consequent lack of system financial key performance indicators.	Financial Management Information System Review to establish functionality for: ■ A coding structure that support external reporting on an input basis as well as internal management reporting on an output basis. ■ Management reporting capability based on user specifications for decision-makers at school, governorate and national levels. ■ Interoperability with other systems that enable data to be imported on student assessment and achievement, school infrastructure information.

Information on the wide range of current system responses to the identified challenges and issues is provided in the relevant chapters of this report.

2.1.4 System Level Areas to be Addressed

Are there recommended additional system level responses that will improve the system's ability to achieve the desired outcomes for learners?

Consortium finding: Yes

This section sets out the key areas across the education system that the Consortium has identified are in need of being addressed in order that the system as a whole improves its ability to successfully achieve the desired outcomes for learners.

The areas identified by the Consortium to be addressed are:

- Governance of major initiatives.
- Key performance indicators.
- Policy development.
- Communications.
- Self evaluation.

These key areas relate to systemic issues that impact across multiple aspects of the evaluation. These are areas of the system that if addressed appropriately will ensure better system performance.

Governance of Major Initiatives

The Ministry of Education currently has several potential transformational initiatives underway or in advanced stages of planning. These include:

- Establishment of an Education Law.
- Curriculum Standards Project.
- Establishment of Specialised Centre for Professional Training of Teachers.
- Establishment of a Assessment Centre (including Statistical Analysis and Research Capability and an Online Platform for Assessment).
- Review and replacement of the current Financial Management Information Systems.

These are classified as transformational projects based on their:

- Critical importance to how the Ministry functions.
- Scale and duration.
- Profound impact on the way the Ministry operates if successfully implemented, and subsequent impact upon the education system.

Each of these initiatives has significant connections to at least two of the other initiatives. This means that there will be:

- Independencies between the initiatives that will need to be monitored and at times managed.
- Risk to one or more of the initiatives if any one of the other initiatives fails to achieve planned milestones to set timeframes.
- Potential conflicts for key resources (access to system decision makers, Ministry IT resources, financial and/or key staff) across the initiatives.
- Opportunities for synergies and greater efficiency to be gained through collaborative developments across the initiatives.

The Consortium found limited evidence that these considerations are currently being managed in a proactive manner at the required level within the education system. For the successful completion and integration of initiatives of this size and duration within an education system it is recommended that formal governance and project management processes are put in place at the earliest opportunity.

Policy development

The Ministry of Education has a Permanent Policy Committee that assesses and advises the Minister of Education on policy initiatives. The Consortium notes that there are currently multiple routes for policy initiatives to arrive at the Permanent Policy Committee.

This in itself is not necessarily an issue but the Consortium also notes, that based on the information provided to the Education Evaluation Project Team, there are:

- No standardised or documented procedures for how policy initiatives are to be presented to the Permanent Policy Committee.
- No documented procedures for the assessment of submitted policy initiatives.

These findings support the policy development concerns noted to the Consortium over the duration of the Education Evaluation Project, including concerns that:

- Policy development occurred that was repetitious or overlapping with concurrent policy development.
- There was limited opportunities for aligning and prioritising key policy developments.

- Policy proposals presented to senior official are of varying quality.
- Policy proposals are often presented in a format that requires lengthy analysis by decisionmakers to identify if key considerations have been addressed in the proposal.
- Policy proposals often lack key information that relates to the Committee's decision making criteria and require further work to address queries or questions raised by the Permanent Policy Committee.
- Policy proposals are often in decision making process for extended periods of time.

The Consortium recommends that a documented and standardised approach to policy development is put in place at the earliest opportunity.

Key performance indicators

There are three key issues that the Consortium has identified in relation to key performance indicators. These are:

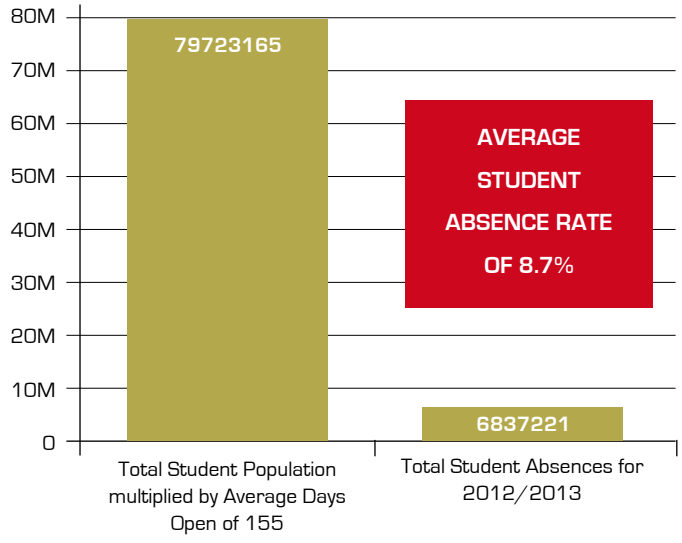
- The Ministry has very few key performance indicators (KPIs) that it has identified and actively monitors. The KPIs that it does use and publish are primarily related to the previous education phase aimed at expanding and increasing student access, e.g. number of schools, number of classes, number of teachers etc.
- The Ministry has developed and implemented a sophisticated technology system, the E-portal, to capture school data centrally but has to date made very little use of the data now available. There is a very significant opportunity for the Ministry to identify and monitor some very critical key performance indicators from this data. There is potential to develop and use, on a real time basis, KPIs for national, Governorate and school decision makers from this data.
- There is a significant lack of financial data available in the system to allow the development of the financial KPIs that are now critical for system leaders to make the evidence based decisions necessary to improve of learner outcomes.

The establishment of a Data Management Strategy would enable the Ministry of Education to set and monitor KPIs. KPIs should be designed to provide feedback into the system on key components that are critical to educational achievement. A matrix of KPIs that encompass educational, financial, and organisational (that is performance of the Ministry of Education and Schools) targets will go some way to ensuring that key aspects of the system are performing as expected, and allow for timely identification of parts of the system that are not performing at the level expected.

A working example of a KPI that could be developed utilising existing data sources could be setting a goal for a low maximum student absence rate. As student contact time has been identified as a critical component to student achievement, a relevant KPI would clearly signal the importance of student contact time to schools and parents, and allow for effective monitoring of a critical system component. By utilising existing data through a monitoring mechanism, and the secondary level of metadata if the goal is not met, interventions by the Ministry of Education can also be effectively targeted to those schools or grade levels with high absence rates, rather than requiring a whole system response to an isolated issue.

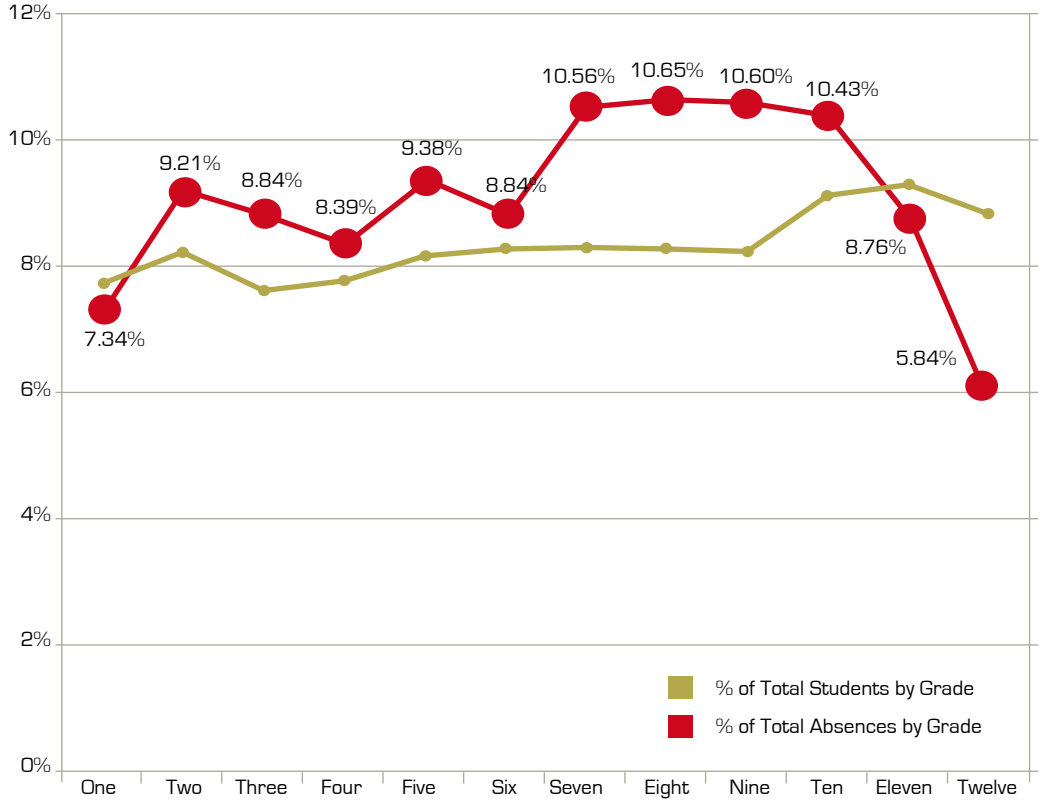
The following graph shows the student absence rate for the previous year was 8.7%.

Graph 9.2 **Average student absence rate for 2012/2013 based on e-portal data**



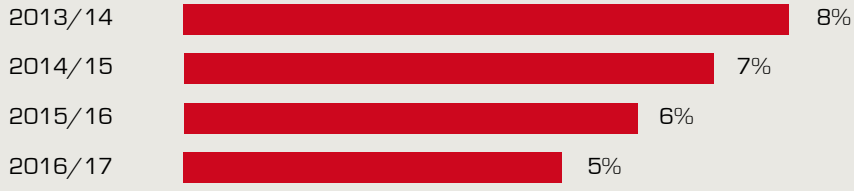
The second level data, shown in the following graph, isolates the issue of high absence rates to senior Cycle 2 levels of education.

Graph 9.3 **Student absence rates by Grade level and proportion of total student population 2012/2013**



Therefore, a relevant example KPI could be articulated as follows:

Student contact time is critical to ensuring that students gain the skills and knowledge necessary to succeed in education. To ensure that student contact time is high, the Ministry has set a goal to reduce student absence from 9% in 2012/13 to 5% by 2016/17.



The Consortium recommends that a Data Management Strategy is established to enable the effective utilisation of data and information to inform the setting of KPIs and effective monitoring of key components of the education system.

Communications

Technology is driving rapidly evolving communication methods. The increasing global connectedness provides opportunities for efficient and timely communication, however it also creates challenges in ensuring accurate communication is disseminated. Key messages can be lost in the vast volume of information.

Over the course of the review, the Consortium found that there was some misunderstanding of key Ministry of Education policies, and reasons for policy developments. There also appeared to be communication barriers within the Ministry of Education, as evidenced by a lack of connectedness between departments, often with closely aligned objectives.

Clear and concise communication is essential to a well performing system that is heavily reliant on people. The education system has a broad and varied stakeholder base, making a communication strategy that incorporates clear key messages, and considers how best to communicate to stakeholders, a necessity.

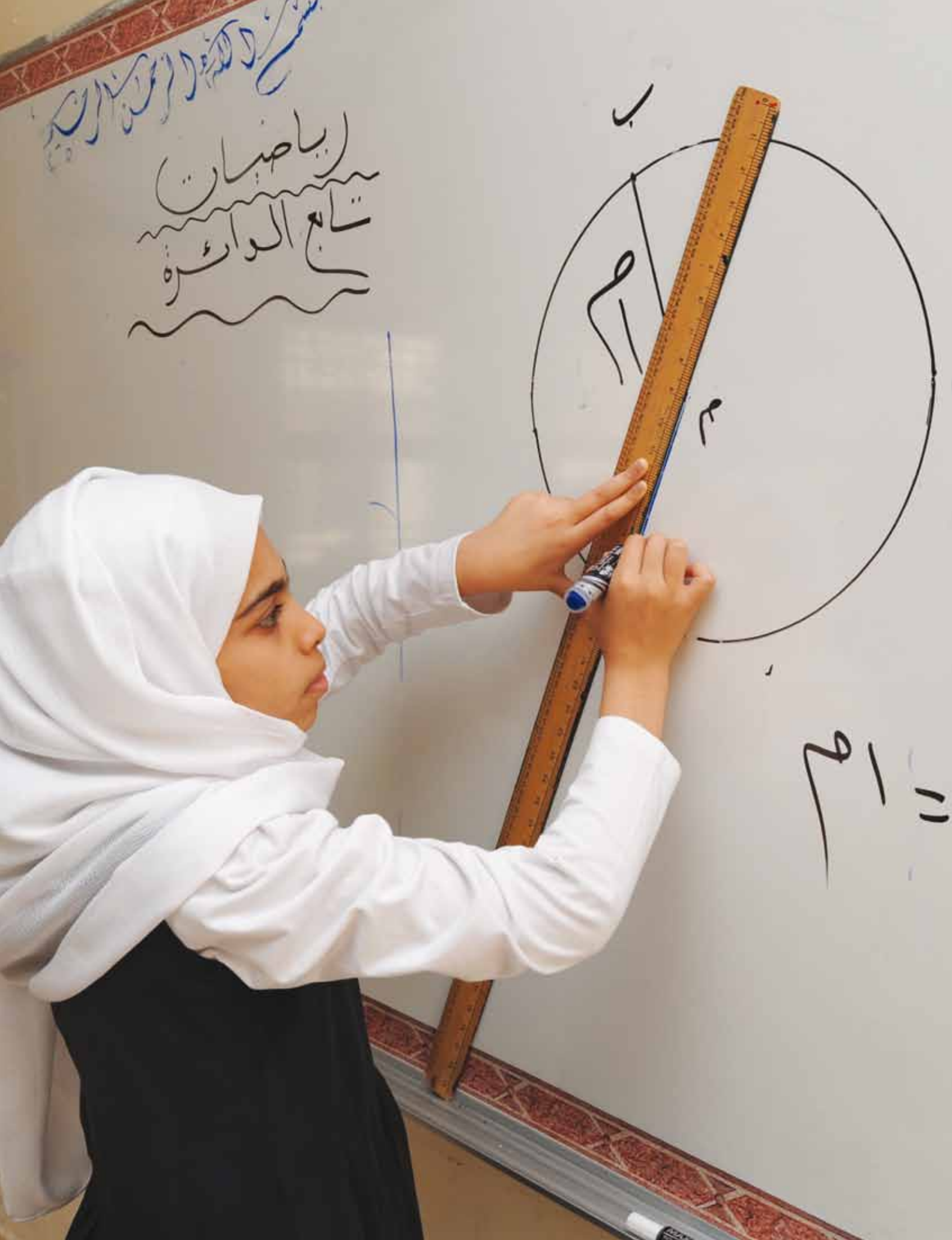
Clear and concise communication is essential to a well performing system that is heavily reliant on people.

The Consortium recommends the establishment of a communications unit within the Ministry of Education, responsible for ensuring the consistency of key messages internally and externally; servicing media and public event demands; using appropriate and effective communication channels, and improving the productiveness of the Ministry of Education by formulating a more coherent narrative across all aspects of the education system.

Self evaluation

In order for sustainable changes to be made to the education system, the Ministry of Education and individual schools must be able to evaluate and assess their performance on an ongoing basis. The self evaluation framework developed by the Consortium provides the tools necessary to undertake ongoing evaluation, however the Ministry of Education will need to ensure that the tools are utilised appropriately in order to operationalize a regular evaluation cycle.

The Consortium recommends that a self evaluation framework pilot is implemented, leveraging off the momentum generated by this evaluation report, as the first step to ensuring a sustainable approach for a continuous improvement approach to lifting the quality of the education system.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2.2 Recommended Actions

2.2.1 Introduction

The Education Evaluation Project considered eight key aspects of the Oman education system. In each of these aspects the Consortium identified that the system has a strong awareness of the challenges and issues it faces. In general, within each of these aspects the Consortium has also identified initiatives that are underway or planned for implementation that have the potential to address the specific challenges and issues identified by the system.

The Consortium identified that the system has a strong awareness of the challenges and issues it faces.

In considering the system responses across the range of aspects the Consortium has considered the following additional question:

Will the current system responses collectively lead to the desired outcomes for learners?

To answer this question the Consortium has considered research on the experiences of other countries that have successfully accomplished their goals for learning. As discussed in Chapter 4 of this report, international research (Mourshed et al., 2010) has identified six system-level interventions that are common to countries that have made significant gains in student performance. These interventions include:

1. Revising the curriculum and standards to improve the quality of education being offered.
2. Building the technical skills of teachers and principals.
3. Assessing students.
4. Putting in place an appropriate reward and remuneration structure for teachers and principals.
5. Establishing data systems that can be used to support the development of the system.
6. Putting in place appropriate educational policies and law to support the improvement and quality of the education system.

These research findings also noted that significant improvement in educational attainment is possible in as little as six years. This international experience supports a number of the initiatives currently underway in the Oman education system and also assists in identifying the additional responses that can be recommended to successfully move the education system to more effective delivery of the required services.

Based on the evaluation of the Oman education system and international best practice the Consortium is of the view that the education sector in Oman will benefit from system changes that are:

- Transformational in nature (i.e. represent a significant departure from current practice).
- Grounded in the principles of good governance.
- Focused on a small number of critical governance areas that can make a significant positive change to the performance of the educational system as a whole.
- Linked to changes in practice in educational delivery that can lift the performance of students.

The most important part of creating change effectively is to ensure that changes are purposeful (i.e. the intended outcome is clear), and that they are linked across all parts of the system (in this case, from the Ministry of Education to the Directorate offices and through to schools) in a meaningful way.

The purpose of changes to the Oman education system is to lift the quality of teaching and learning so that the skills and knowledge that young Omani have when they leave school equip them to be a good citizen who will make a strong contribution to the future economic prosperity of the Sultanate.

The level of change required in Oman to meet its desired goals, in a timeframe that will be acceptable to stakeholders, will need to be 'transformational'.

By definition, transformational change is radical in nature. That is, either the scale and/or the nature of the change is a significant deviation from that of the existing order. Transformational change is most useful when government is seeking a significant lift in performance, or where the time frame to reach the required outcomes is very short.

The Consortium notes that a number of the Ministry's current initiatives are transformational, or rather if successfully delivered, will be transformational. As noted in the Findings section there are five areas that the Consortium has identified to be addressed by the education system that if addressed are likely to significantly enhance the successful implementation of current initiatives.

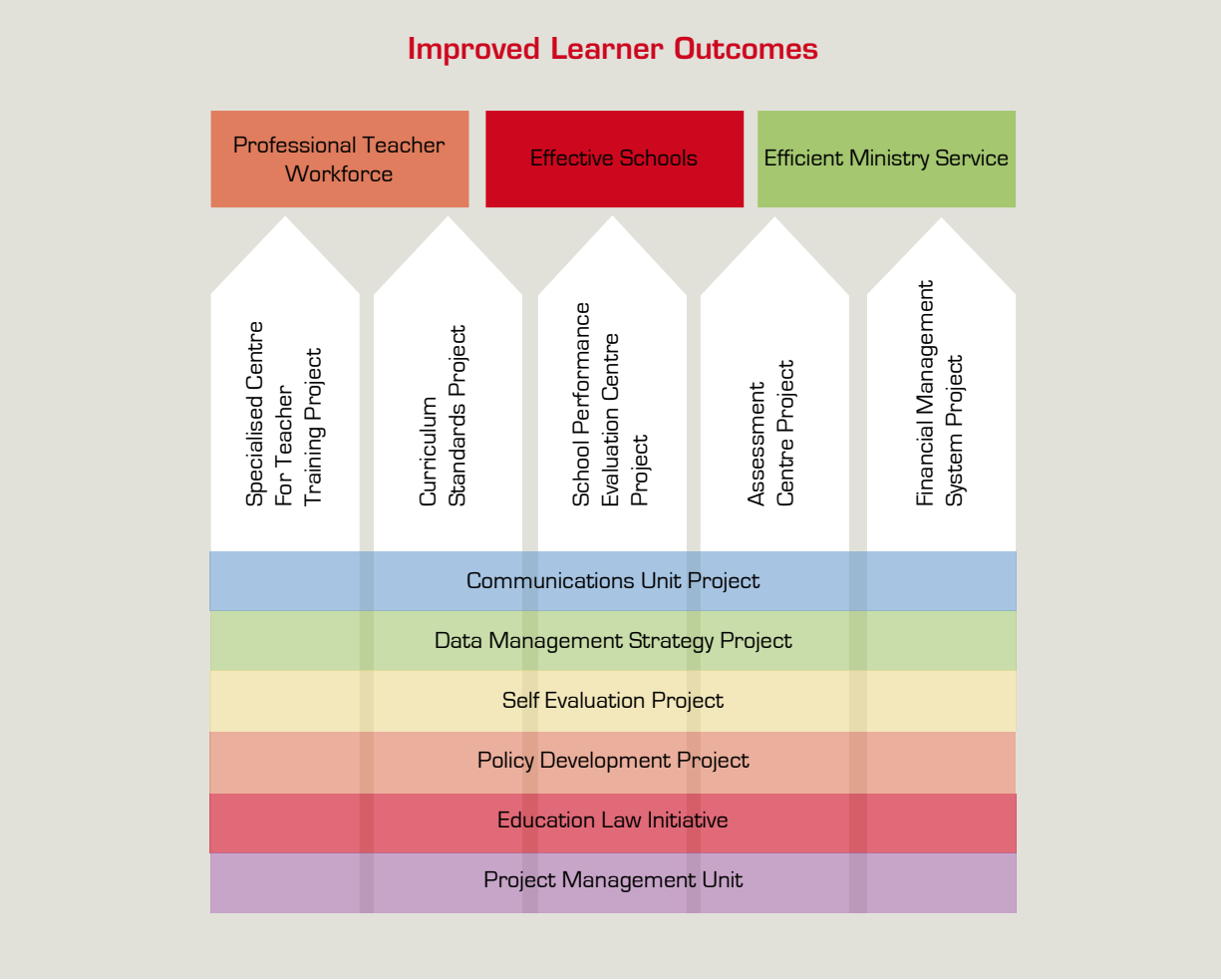
The Consortium notes that a failure by the Ministry to address these five areas within the 2014 year, is likely to have a significant impact on the ability of the Ministry to successfully implement the current initiatives in a way that is likely to lift learning outcomes in a timeframe that will meet stakeholders' expectations.

The following table sets out the five areas to be addressed and the Consortium's recommended action for each area.

No.	Area To Be Addressed	Recommended Action
1	Governance of major initiatives	Establish a Ministry of Education Project Management Unit (PMU)
2	Policy development	Reform the Ministry of Education Policy Development Process
3	Key performance indicators	Establish a Ministry of Education Data Management Strategy
4	Communication	Establish a Ministry of Education Communications Unit
5	Self evaluation	Implement a Self Evaluation Framework Pilot

The Consortium envisages that the implementation of the fi ve recommended actions will be key levers for the successful implementation of the transformational projects already underway.

Graph 2.1 **Unification of existing and recommend initiatives**



The following sections set out each of the recommended actions and the associated rationale and considerations to be taken into account in the implementation of the actions. Chapter 3 sets out an implementation plan for each of the recommended actions.

2.2.2 Recommendation One: Project Management Unit

Consortium Recommendation One

Establish a Ministry of Education Project Management Unit (PMU)

Description

It is recommended that:

- The Ministry of Education initiates a project to establish a PMU.
- The PMU is allocated responsibility for current major initiatives and new major initiatives implemented by the Ministry.
- The PMU reports to a Supervisory Committee consisting of the Ministry Under Secretaries.
- A key deliverable of the PMU project is the establishment of project management functions within a new or existing structural unit in the Ministry of Education.

Key Objectives

The PMU project is aimed at ensuring the successful completion (within scope, time and budget constraints) of Ministry projects by:

- Managing and maintaining a project management process framework that Ministry projects operate within.
- Coordinating projects that have related outcomes and require interaction and cooperation during implementation.
- Ensuring that momentum is maintained across the portfolio of projects.
- Gaining approval for a plan to move the PMU functions to a new or existing structural unit in the Ministry of Education within 12 months of project initiation.

Suggested Timeframe

12 months from project initiation to project completion.

A proposed Implementation Plan is set out in Chapter 3.

Rationale For Recommended Action

When organisations operate within a purely Business as Usual model (the normal execution of standard functional operations within an organisation) it is often difficult to get things done in a timely fashion, without the compulsion of completion by a defined date or within a constrained scope. Many proposed activities are delayed or implemented without urgency, or without a clear understanding of whether they have been successful.

The counter to Business as Usual is Project Management.

Project management in a controlled or structured environment means that proposed activities are well devised, well planned, well executed and continually focused on successful outputs, outcomes and benefits. By structuring a proposed activity as a project there is a higher likelihood of momentum being maintained as projects by definition have defined start and end dates and Project Managers are tasked with ensuring that these are maintained.

Accountability is inherent in project management as the structured and controlled environment of a project with stage-gates, milestones and structured reporting means that all stakeholders are informed of progress and the success and risks of every aspect of a project. This ensures that people are accountable for their responsibilities.

Projects are primarily concerned with the successful production of the outputs of the project within scope, time and budget constraints. However for genuine results or success to be achieved the outputs must lead to outcomes and ultimately, benefits. It is most important then that a unit or entity is established that lasts longer than the individual project to ensure that outcomes and benefits are realised. This is one of the core functions of a PMU. Other critical functions of a PMU are to:

- Manage and maintain a Project Management Process framework that all projects operate within.
- Ensure that projects are well prepared before appointing project managers and project personnel.
- Ensure success criteria, desired outcomes and benefits are articulated at the start of a project.
- Coordinate projects that have related outcomes and require interaction and cooperation during implementation.
- Ensure that momentum is maintained across a programme or portfolio of activity.

Project Management Definitions

Inputs: Resources such as people, materials, energy, information, documentation or finance that are put into a system, process, project or activity. Within a system many inputs are prerequisite to decisions being made, further progress being made, further processes being implemented or other inputs being introduced.

Outputs: A specialist tangible or intangible product that is handed over to a user(s).

Outcomes: The result of changes, normally affecting real-world behaviour and/or circumstances. Outcomes are desired when a change is conceived. They are achieved as a result of the activities undertaken to effect the change. Outcomes are the result of the Outputs being used by users. Until Outputs are used there are no Outcomes. This usually requires training and/or communication to users. Hence, training and/or communication are critical components of a project. Outcomes should /need to be designed and planned very early in any process, project or activity to create accountability. Without planned Outcomes the success and quality or any activity cannot be measured with any assurance.

Benefits: The measurable improvement resulting from an Outcome perceived as an advantage by one or more stakeholders. Benefits are the justification for the investment made. Benefits are most often stated in terms of people being better off in some way. Benefits must be defined, measureable and planned to allow accountability in the process and to ensure that success can be measured and claimed.

Benefits Review Plan: A plan that defines how and when a measurement of the achievement of the project or activity benefits can be made. If the project is being managed within a programme of projects, this information may be created and maintained at the programme level.

Benefits Realisation: The practice of ensuring that the Outcomes of a project produce the projected benefits claimed in the original project proposal.

The Ministry of Education currently has a number of critically important projects underway with substantive interdependencies and associated risks that require coordination. For this reason it is strongly recommended that a PMU is established within the Ministry of Education.

The Consortium recommends that the PMU project is initiated as soon as possible, given the range of important inter-related projects currently underway at the Ministry.

Considerations To Be Taken Into Account In Implementing The Action

The establishment of a PMU is a project in its own right and needs to be treated as such.

The establishment of a PMU and the management and coordination of the other projects through the PMU can happen simultaneously. It is expected that the project to establish the PMU would have a duration of 12 months, with a support period of a further 12 months as the PMU is moved to an EPMO (Enterprise Programme Management Office).

An EPMO is a permanent function that all projects are coordinated through. This should be the desired goal for the PMU, to mature into a 'centre of excellence' in project management and create specialisation in process, risk, quality and change management for the Ministry.

It is proposed that once established the following projects will come under the responsibility of the PMU:

- Education Law (existing Ministry project).
- Curriculum Standards (existing Ministry project).
- Specialised Centre for Professional Training of Teachers (existing Ministry project).
- Assessment Centre (existing Ministry project).
- Finance Systems Review (existing Ministry project).
- Policy Framework Review (recommended by in this report).
- Data Management Strategy (recommended by in this report).
- Communications Office (recommended by in this report).
- Self Evaluation Framework (recommended by in this report).

2.2.3 Recommended Action Two: Policy Development

Consortium Recommendation Two

Reform the Ministry of Education Policy Development Process

Description

It is recommended that:

- The Ministry of Education undertakes a review of its current policy development processes and the organisational and committee structures associated with policy development.
- The review be established as a project under the responsibility of the newly established PMU (Recommended Action One).

Key Objectives

The review of policy development is aimed at clarifying, consolidating and standardising policy development processes by:

- Establishing a policy framework for policy decisions.
- Removing and/or minimising existing overlaps in function between existing Ministry structures (Directorates/Departments/Sections or Committees).
- Allocating key accountabilities and responsibilities for policy development in an efficient and effective manner.

Suggested Timeframe:

9 months from project initiation to project completion.

A proposed Implementation Plan is set out in Chapter 3.

Rationale For Recommended Action

Setting the policy parameters for lifting the quality of education in Oman is the foundation for bringing a unified approach to underpin all of the endeavours across the educational system to achieve agreed outcomes. Policy is a critical lever of governance in that it sets the platform for decision-making about the way that education is delivered in Oman.

Policy is the general principles or course of action set by the Minister to guide operations in order to achieve strategic objectives. The relationship, responsibilities and functions of strategy, policy and operations, within an Omani context, are mapped in the following model.

Strategy Level

Key responsibilities at this level include (but are not limited to) appointing the Minister of Education; strategic oversight of education and Government systems to achieve the strategic aspirations for Oman, including economic development; advancement of the quality of life of Omani people and a skilled and capable labour force.

Strategy implementation:

- Vision and values of education set by H.M Sultan Qaboos bin Said.
- Strategic initiatives via Royal Decree.
- Oman 2020 Strategy.
- Education Strategy as set by the Education Council.
- Strategic principles articulated in the Oman Philosophy of Education 1975; Article 13 of the Basic Statute of State.

Policy Level

Key responsibilities at this level include setting the high-level policy principles to achieve the strategic aspirations for education; appointing Senior Ministry of Education officials and Committee members, and oversight of the Ministry of Education Budget, activities and functions.

Policy implementation:

- Policy set by the Minister of Education, with agreement by Cabinet where required.
- Policy guidelines are in a range of subject specific areas.
- New policy initiatives delegated to Committees.
- Issue specific policy initiatives via Ministerial Decree.

Operational Policy Level

All members of the Ministry of Education, including central and directorate staff; and 'front-line' staff (teachers and school management) are responsible for implementing policy objectives.

Operational implementation:

- New policy initiatives are communicated via central and directorate staff; and via the Education Portal.
- Responsibilities and functions are articulated within employment contracts and subject to specific Ministerial decrees.

As the model demonstrates, policy development is a critical bridge between strategy and operations. Observations of the policy development process within Oman have highlighted the following features:

- Policy development is often reactive, i.e responding to particular issues as they arise
- Policy is often specified to a high level of detail via the Ministerial Decree, which is contrary to the widely accepted approach that policy articulates principles or a broad course of action
- The links between policy and operational policy are not clear. Operational policy is contained within existing documents such as the Guide to Basic Education, however there does not appear to be a clear process for the production of operational policy as a result of new policy initiatives
- There appears to be a low level of monitoring of new policy initiatives, including the measures of success, or Key Performance Indicators (KPIs), and subsequent feedback from implementation back into the high level strategy for education.

Considerations To Be Taken Into Account In Implementing The Action

Unified, cohesive policy allows for the setting of resource allocation and management priorities across the educational system. It is important, therefore, that critical policy settings relating to curriculum, teacher training and professional development, schooling, assessment, educational equipment and materials, teaching resources, property and financial allocations are held centrally, not distributed across the system.

Ideally, educational policy would be co-ordinated from a central point within the Ministry of Education rather than being developed and presented for approval from separate sections and/ or committees of the Ministry as currently occurs. Central organisation of core governance functions enables cohesiveness of purpose and ensures that key policy settings are aligned and work well together.

Central organisation of core governance functions enables cohesiveness of purpose and ensures that key policy settings are aligned and work well together.

It is recommended that the following targets are set for the policy development review project:

2014 – A dedicated policy function is established with responsibility for leading the policy design and development processes for the Omani education sector. This function replaces the distributed policy functions across the current Ministry structure.

2015 – Policies have been developed and decreed to lift educational quality in accordance with agreed targets. This includes, but is not limited to, policies relating to:

- Educational achievement by boys.
- Improvements in literacy rates.
- Teacher training standards.
- Professional development for teachers.
- Curriculum developments including the contribution of e-learning opportunities.

Within the Omani context, there are some opportunities for improvements to the policy development processes of the Ministry that are recommended for consideration in the policy development review. The following principles of good policy development should be considered.

Clearly articulate responsibilities and functions of policy developers

For those responsible within the Ministry for drafting policy it is important, to have a clear understanding about the expectations for policy development, to take responsibility for delivering high quality policy advice, and to understand the processes that must be followed to produce policy advice. The criteria for policy decisions should be well understood by all, for example, a preference for policies that result in the maximum net benefit to Omani citizens; policies that are the most efficient or cost-effective; or policies that have the greatest impact on quality or learning success.

Introduce consultation with key stakeholders for policy decisions

Policies developed in isolation can result in efficiency opportunity costs, strategic misalignment and contradictory policy settings across departments. The key benefit of consultation with other parties is identifying any barriers or flaws in policy development that may result in unintended negative consequences. It is recommended that the Oman Ministry of Education consider introducing staged consultation rounds. This would involve consultation at different stages of the policy development process, e.g. a consultation round on possible policy options and then a consultation round on the proposed policy option.

Consultation with stakeholders could involve one or more of the following approaches.

Extending the existing committee structure to include external stakeholders: The current committee structure used for new policy initiatives could include a broader base of members from relevant stakeholder groups. In particular, the Ministry of Manpower and Ministry of Higher Education, who have significant interests in educational outcomes, and the Ministry of Finance, who are responsible for the overall expenditure, could be included. External stakeholders can bring relevant perspectives and expertise to policy discussions, identify links and efficiencies with their own organisations, and identify strategic alignments. It is important to ensure that people selected for committee memberships have an excellent knowledge of activities within their own organisations, and strong strategic leadership.

Consider 'focus groups' of interested stakeholders: Within education, principals, teachers, parents and students are key stakeholders, and are able to offer input regarding how policies may be operationalised. The Ministry of Education may wish to consider setting up focus groups of trusted stakeholders to discuss either issues with policy in development, including an options analysis and critique, or operational policy once high level policy has been confirmed. This will assist in ensuring that policies will result in the intended outcomes by bringing a 'front-line' view of policy developments.

Utilising social media for consultation: The high level of mobile and internet use in Oman makes web-based consultation an attractive option. The benefit of using online consultation processes includes allowing for relevant and focused questions, ease of quantifying and analysing questions, and accessibility to a large volume of people.

Standardise the presentation of policy papers to decision makers

Policy papers should clearly and simply articulate the issue that is being addressed, and show an understanding of the considered options, implications, trade-offs and anticipated outcomes of policy decisions.

Policy papers should be written in easy-to-understand language and use an evidence base to assert the issues and subsequent impacts. The core content of a policy paper should include the following sections:

- **Proposal**: the proposal should be brief and summarise clearly the decision, agreement or action that is being sought by the Cabinet, the Minister, or the Policy Committee.
- **Background:** the background of a policy initiative provides the context and history of an issue. This should include previous policy initiatives that have been implemented, and the subsequent consequences. The background section should summarise and reference previous Ministerial decrees and the relevant legislation that has been issued, the actions that arose and outcomes achieved. The background section should include any relevant information and 'set the scene' of the policy being suggested.
- **Comment:** the comment section should include a narrative of how the policy recommendation was arrived at. This includes a description of the options considered, and why the final policy recommendation is preferred. The comment section makes the case for the policy recommendation.
- **Financial implications:** new policy initiatives should be fully costed in terms of both the capital and operational costs, and also secondary financial implications, such as financial implications on third parties. The financial implications should identify the source of revenue to fund the policy initiative.
- **Stakeholder implications:** Policy development should include consideration of the impact upon stakeholders, in particular, vulnerable persons who may be significantly affected. A section that includes consideration of how the policy impacts upon children, women and disabled people should be included, where relevant.
- **Legislative implications:** the legislative implications section should clearly articulate whether the new policy will supersede a previous Ministerial decree, or require any consequential changes to other decrees or legislation.
- **Regulatory impact:** the regulatory impact section articulates the full anticipated impacts of the policy both upon the education sector, and also considers wider social and economic consequences. The regulatory statement should include all of the anticipated impacts, both positive and negative, and the scale of these impacts. If relevant, a risk mitigation section should be included to articulate how negative impacts will be managed. The regulatory impact section should also include the anticipated outcomes, and set a monitoring and report-back schedule, and measures for assessing whether outcomes are being achieved.
- **Communications:** A communications plan for the policy should be included in the paper. This may state how the policy will be announced, for example, by the Minister publicly and via Ministerial decree; communications through the Education Portal, and any other media that may be relevant.
- **Recommendations:** Having provided the context, rationale, estimated financial and regulatory impacts, and communications, the recommendations should flow logically from this narrative. Recommendations should summarise the key decision points and stand independent of other recommendations as a single decision.

- Recommendations may seek action from the Minister or Cabinet, this could include a recommendation to:
  - Approve a policy.
  - Decline a policy.
  - Agree to a policy principle.
  - Rescind a policy decision.
  - Delegate responsibility to an official, or
  - Note a particular point or action.

Appendix 11 sets out a draft policy paper format for consideration and provides a worked example of the potential content when this format is used.

2.2.4 Recommendation Three: Data Management Strategy

Consortium Recommendation Three

Establish a Ministry of Education Data Management Strategy

Description

It is recommended that:

- The Ministry of Education initiates a project to establish a Data Management Strategy.
- The project is established under the responsibility of the newly established PMU (Recommended Action One).

Key Objectives

The review of policy development is aimed at ensuring the education system data is accurate, accessible and available in a timely manner by:

- Establishing a Ministry of Education Data Management Strategy.
- Removing and/or minimising overlaps in function between existing Ministry structures and/or new initiatives underway (Directorates/Departments/Sections).
- Allocating key accountabilities and responsibilities for data management, analysis and publishing in an coherent and effective manner.

Suggested Timeframe:

7 months from project initiation to project completion.

A proposed Implementation Plan is set out in Chapter 3.

Rationale For Recommended Action

Oman has a 'data rich' education system. Information is gathered from a wide range of sources, and covers many aspects of the education system. Data management and system performance monitoring is critical for its use as an input to future planning and evidence based policymaking. The key is to translate available data into information that can be used to ensure the efficient and effective management of the sector.

System progress, research, project reporting, outcomes and benefits measurement all require data collection to be accurate. All non-data measures of success are based on perception and subjective thinking. This often leads to a lack of accountability.

While data alone does not solve these issues entirely it is difficult to argue against genuine facts and well-collected and analysed data. Oman's education system has the basis of an excellent data management process. There are significant quantities of data currently being collected and the Ministry's e-Portal, a centralised repository of system wide data, is in advance of many education systems around the world.

Oman's education system has the basis of an excellent data management process.

However, the following points were identified, observed and/or experienced during the Education Evaluation Project:

- Many school data sets were incomplete (not all schools represented, not all schools entering all data consistently).
- A lack of trust that the data is accurate or genuine.
- Little use of data for decision-making (possibly as a direct result of the previous point).
- Little validation and quality checking of data despite significant opportunities for these actions to be undertaken.
- Little use of data for genuine system analysis (beyond simple reporting of statistics).
- Compliance based reporting, i.e. emphasis on the inputting of data for the centre (schools entering data which they themselves never use or have limited access in an appropriate format to use).
- Multiple requests for the same data, including requests from schools for manual reporting of data already entered into the E-portal (leading to data being viewed as an administrative/compliance burden).
- Little specific data collection for specific usage (e.g. teachers using assessment data to inform teaching and learning).

As well the Ministry has identified that it currently has three staff databases in operation under the management of three different Directorates:

- The E-Portal - Directorate- General of Information Technology.
- Financial System HR - Directorate- General of financial Affairs.
- Supplier System ORACLE - Directorate- General of Administrational Affairs.

The Ministry has established a Committee to consider the issues and challenges associated with having three databases and has reported that:

- The databases use different job title coding.
- Do not have interoperability.
- Hold different data for the same staff.

These issues and challenges point to the need for the Ministry of Education to develop a Data Management Strategy.

The main areas of concern that the strategy would need to address are:

- Data collection and storage.
- Data completeness, accuracy and validity.
- Data access – the right data being accessible to the appropriate people.
- Data analysis and usage – evidence based activity, data driven decision-making, data based measurement of progress and success.

Considerations To Be Taken Into Account In Implementing The Action

Even where data is collected and stored electronically, it is less useful if it is not widely available in a consistent form and format to all interested stakeholders (e.g. teachers, directorate staff, researchers and policy analysts). While there is a significant amount of data available about the education sector, the experience of the Consortium in carrying out this project brings us to the view that there is much to be gained from making this data available in aggregated forms that can be easily accessed by anyone in the system that needs it for research or analytical purposes. If the data was made more easily available to managers, committee members and other decision-makers it could be a valuable asset for ensuring that decisions are well grounded in reliable information.

To be effective, data must fit the following criteria:

- Be Useful.
- Be Accurate.
- Be Fit for purpose.

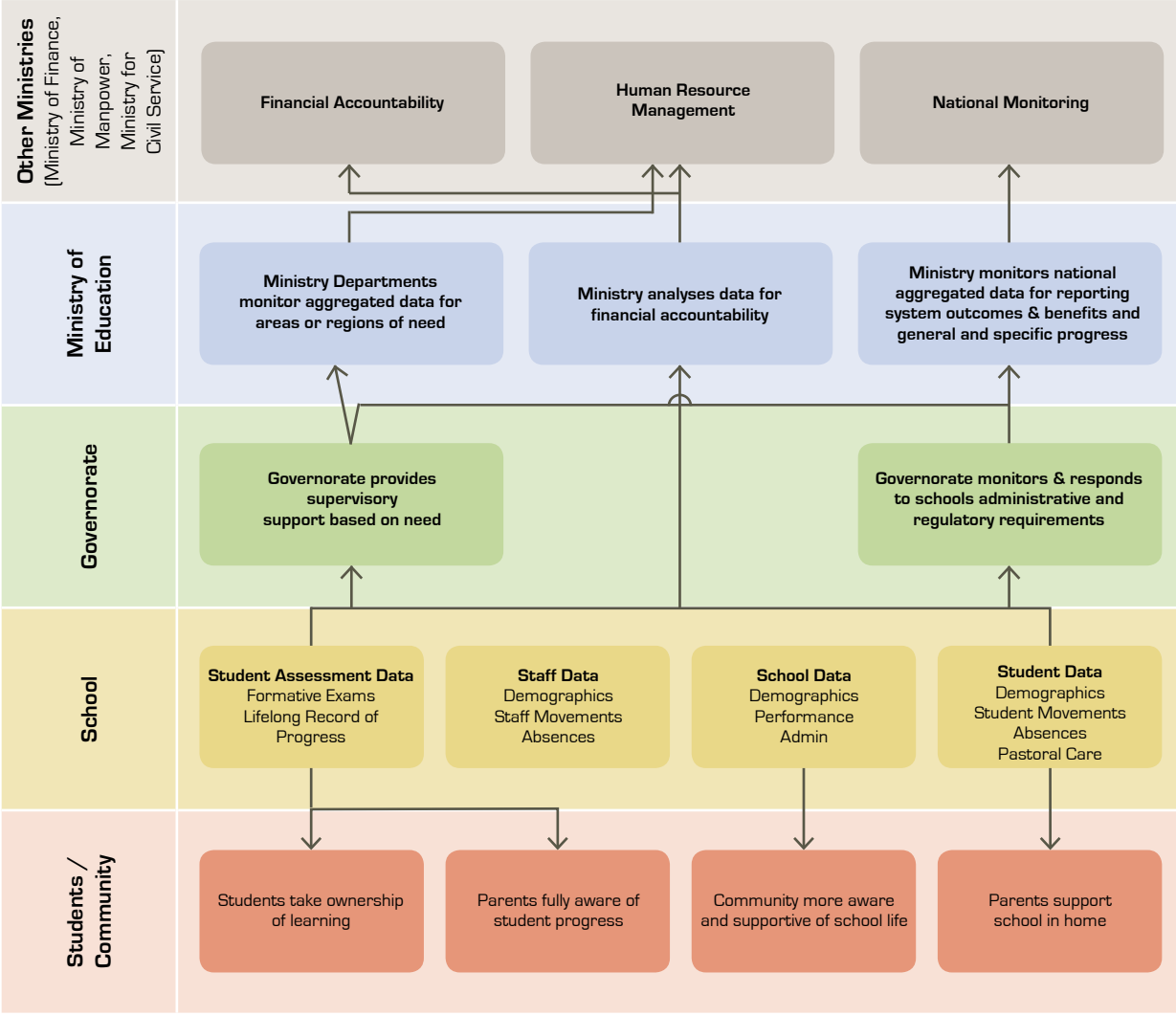
A data management strategy would need to identify and map the following:

- What data is currently being collected?
- Where does it come from?
- For what purpose is it collected?
- How is it used?
- How valid, accurate and complete is it?
- How could it be used?

The strategy would then create an operational framework where data is entered once at the source and then used multiple times for the purposes and by the entities that would most benefit from it. The answer is not to collect more data but to recognise that subsets of the same data can be used by different people for differing needs.

Graph 2.2 Uses of Data by Different Entities

Who needs and uses the data?



The development of the Data Management Strategy will need to include a consideration of the financial data and information requirements of system leaders at all levels within the system (i.e. From the Minister, Under Secretaries, Governorate Director Generals to school principals). The current financial management systems, and associated data, that are in place reflect the historical imperative to 'expand capacity to enable increased participation'. The financial management system needs a 'reset' to focus on the new imperative – 'improving the quality of teaching and hence increase student achievement'. Financial data, and its management, has a key role to play in lifting educational performance. There will need to be a shift in focus of the internal financial management systems from focusing on individual inputs to focusing systemically on outputs and outcomes. For example, this will require systems integration – build integrated data capability so the new Financial Management Information System being developed will have integration with data from the new on-line Assessment Centre.

Identifying the data requirements, source, usage, appropriate users and how they can be accommodated would be key goals of a data management strategy.

Currently there are a number of Directorates in the Ministry that have functions relating to the gathering, storage, and analysis of education system data. The new Assessment Centre initiative and the Specialised Centre for Teacher Training initiative also include proposals for the analysis and/or collection of education system data.

The Data Management Strategy will also need to consider and make recommendations on:

Data management	■ Technical – Physical location, Disaster Recovery, Security. ■ Storage – Active versus Archive. ■ Custodianship including access. ■ Integrity.
Analysis and publishing tools	■ What are the different analysis needs of different stakeholders? ■ What are the training needs of different stakeholders? ■ How do the various stakeholders want to receive their data reports/graphs? ■ Multiple analysis units across the Ministry or a single unit?

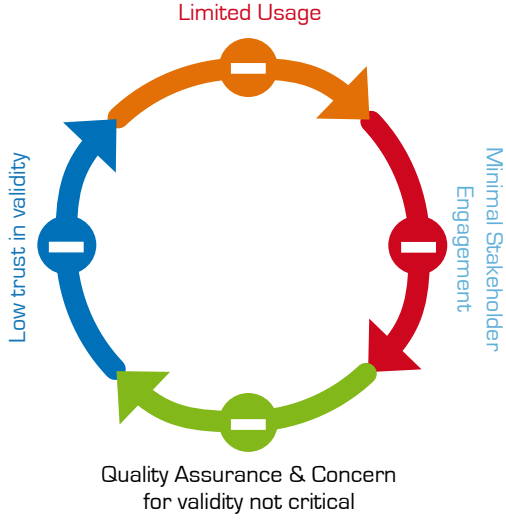
It is recommended that the following targets are set for the data management strategy project:

2014 Key data sets that provide information on the performance of the sector (e.g. daily attendance records) is available to key decision-makers in the Ministry of Education.

2016 All education system data (including aggregated financial, attendance, personnel and student learning data) is available electronically, and is available on the E-portal to all members of the education sector.

It is likely that a number of stakeholders will raise concerns about using the data currently available in the E-portal. There is likely to be calls from some stakeholders to fix the data first. The difficulty with this approach is that it locks the system in a Negative Reinforcing Loop, from Causal Loop Model Theory (Senge 1990). The simple diagram here demonstrates this concept. In this diagram, as with most Negative Reinforcing Loops it is not possible to improve or break the cycle by forcibly attending to one of the elements alone.

Graph 2.3 **Simple Negative Re-Enforcing Loop**



When data is being used, the users and creators of that data have an interest and investment in the accuracy and validity of the data. Therefore one of the easiest and most obvious ways to improve accuracy and completeness in data collection is to publish the data to the users and therefore create a demand for it and for its accuracy.

Feeding current data back into the sector:

- Creates demand for data.
- Creates demand for data to be more accurate.

Demand can be further grown by providing analysed data in graphical format using the following approaches:

- Suggest potential responses to stakeholders (e.g. 'You could do ABC based on this data').
- Suggest stakeholders develop their own responses (e.g 'What could you do to improve learning outcomes based on this data?').

A critical component to effective data usage is referred to as 'data literacy'. Training on how best to use data, interpret data, and turn data into information, will be an important in the development of the Data Management Strategy. The goal is not to make every user a data analyst, as the majority of data users only want what is relevant to them in a form they can read and understand. When data is presented in this simplified, and often graphical, format it is referred to as 'fit for purpose' as it does not require a specialist data analyst to enable it to be useful. This is the most useful format to the end user. However, using data to inform decisions or use in the teaching and learning process is a skill that is learned and mastered over time the more you practice it.

Training on how best to use data, interpret data, and turn data into information, will be an important in the development of the Data Management Strategy.

2.2.5 Recommended Action Four: Communications

Consortium Recommendation Four

Establish a Ministry of Education Communications Unit

Description

It is recommended that:

- The Ministry of Education undertakes a review of its communication functions requirements and associated delivery mechanisms.
- Based on the analysis of the required functions, the Ministry of Education establishes a Communications Unit with these functions.
- The review be established as a project under the responsibility of the newly established PMU (Recommended Action One).

Key Objectives

The Communications Unit project is aimed at clarifying, consolidating and standardising communications functions by:

- Identifying the Ministry of Education's required communications functions.
- Establishing a Communications Unit to deliver approved functions.
- Removing and/or minimising existing overlaps in function between existing Ministry structures (Directorates/Departments/Sections).
- Allocating key accountabilities and responsibilities for communications functions in an efficient and effective manner.

Suggested Timeframe:

8 months from project initiation to project completion.

A proposed Implementation Plan is set out in Chapter 3.

Rationale For Recommended Action

A mechanism for the delivery of high quality communications functions enables the effective flow of information and ideas between an agency and its internal and external stakeholders, to facilitate participation, service delivery, and informed decision-making, and to build accountability and trust in government. This is achieved by developing; delivering and evaluating public agency communications based on good practice communications techniques, supported by the principles of integrity and neutrality of the public service.

The Ministry of Education is a large public sector organisation that delivers services directly to the public. It must manage and seek to positively influence public attitudes and/or behaviours to achieve beneficial outcomes for education.

Vertical and horizontal communications within a system are essential to the success of any significant change process. Education system decision-makers must effectively communicate decisions to all parts of the system to ensure that implementation is effective. People respond and cooperate most effectively when they know about and understand the change that is required, and how they can assist. Poor communication, on the other hand, results in frustration and a lack of support for key initiatives.

Every organisation has communications needs that are generic to the whole organisation (corporate communications) and communications that are specific to particular operational business units, support business units (e.g. Human Resources) or projects.

It is recommended that the Ministry establishes a centralised communication function model. Under a fully centralised model, communications staff members are employed and managed centrally, and mostly work from a central location. Individual service lines have few, or no, dedicated communications staff and are instead serviced from a central pool of communications people who work across the organisation. Communications services to be provided are clearly set out in agreed plans, which may be supported by service agreements. This model often uses an account management approach to deliver services to business units.

It is recommended that the Ministry establishes a centralised communication function model.

In this model there is a high degree of central direction. Business units need very clear communications plans and/or service agreements that set out what will be delivered, and someone to manage the relationship and ensure the services agreed are delivered.

The advantages of this model are:

- Synergies develop between communications staff as they work closely together leading to efficiencies in delivery and stronger alignment of a 'Ministry-wide' communications approach.
- The business units have access to the full resources of the communications team (including web and media skills), meaning that additional skills can be brought in where required and additional resources applied to meet peak workload.
- The skills and experience of the communications staff are available to the whole organisation, and can be applied where they are needed.
- Staff are managed by a person who understands their skills and is able to judge their performance.
- Staff have greater development and career options.
- Easier to integrate corporate and service communications because all staff are part of the same team.

Considerations To Be Taken Into Account In Implementing The Action

It is recommended that the following targets are set as the requirements to be delivered following the establishment of the new Communication Section:

2014 Comprehensive communication and stakeholder engagement plans are developed, that seek to engage all parts of the education sector in a collective endeavour to raise system performance.

2014 Agreed quality indicators of success are communicated to every school to direct learning.

2015 The online feedback forum currently on the e-portal is marketed widely across the education sector and people are encouraged to contribute ideas to improving quality within the schooling system.

The need and ability to effectively and efficiently deliver the following communications functions should be considered within the review project:

1. Establishing Annual Key Messages	■ As part of the annual planning process education system leaders, in conjunction with the Communications Unit, will set the three to five key messages governing internal communications and set the three to five key messages governing external communications. ■ These will be recorded in the Ministry's communications plan for the year. ■ All external and internal communications will reflect at least one of the relevant key messages.
2. Identifying Key Opinion-Formers	■ For the purposes of communications planning, key opinion-formers are defined as those groups and individuals likely to influence the performance of a group within the Ministry or of the Ministry as a whole.
3. Communications services	■ Communications advice and planning. ■ Strategic and tactical communications advice to senior management. ■ Formal communications planning for the organisation, business units/work-streams and for projects. ■ Crisis and issues management.
4. Brand management	■ Management of visual identity/Ministry's look and feel. ■ Management and/or advice on other aspects of brand (e.g. recruitment brand/advertising) depending on the nature of the Ministry. ■ Management of the relationships with design and advertising agencies (if used). ■ Reputation management.
5. Media services	■ Strategic and tactical advice to management on managing media issues. ■ Media liaison (reactive and proactive). ■ Drafting of media releases and placement of stories. ■ Monitoring of media coverage and analysis of media trends. ■ Media training and coaching/image coaching.

6. Publications, web and audio-visual	■ Writing for business unit publications, corporate publications (including accountability documents), for web and for intranet. ■ Editing and proofing. ■ Design and production of publications, web or management of these services by external agencies. ■ Advice on new media and management of risks and opportunities around use of new media. ■ Audio-visual production (including photography and video production) or the management of these services by external agencies.
7. Events and presentations	■ Speech writing. ■ Speech/presentation coaching. ■ Event management. ■ Design and production of presentations and supporting material.
8. Internal communications	■ Management of, or support for, programmes to foster employee engagement and communicate corporate and business unit objectives. ■ Change management communications.
9. Relationship and stakeholder management	■ Support senior management to manage relationships with key stakeholders. ■ Management of resources supporting this e.g. contact database. ■ An important communication function is to build up effective and transparent feedback loops. That is, it should be possible for stakeholders, inside and outside the G1-12 education system, to provide officials, analysts, managers and decision-makers valuable information on their concerns or needs of schools, students, parents or directorates.
10. Social marketing	■ Development of behavioural change strategies and accompanying campaign collateral. ■ Benchmarking and monitoring behavioural change campaigns and reviewing strategies annually.

11. Advertising	■ Development of an advertising strategy. ■ Management of campaign research and monitoring. ■ Production of creative and media briefs for advertising agency partners. ■ Management of advertising agency relationships.
12. Research related to customer satisfaction and reputation	■ Managing relationships with Ministry's research partners. ■ Development of timely research briefs. ■ Implementation or management of implementation of qualitative and/or quantitative research projects as required.

2.2.6 Recommended Action Five: Self Evaluation Framework Pilot

Consortium Recommendation Five

Implement the Self Evaluation Framework Pilot

Description

It is recommended that:

- The Ministry of Education initiates a project to pilot the Self Evaluation Framework developed in the Education Evaluation Project.
- The project is established under the responsibility of the newly established PMU (Recommended Action One).

Key Objectives

The Self Evaluation Framework Pilot is aimed at increasing the capability and capacity of the education system to create a permanent state of on going evaluation of all aspects of its operations by:

- Implementing the Self Evaluation Framework across a sample of selected schools in association with relevant staff from Governorate and Ministry Directorates.
- Using the pilot schools to identify, test and trial data and information generated from the Data Management Strategy Project.
- Gaining approval for a plan to move the operational management of the Self Evaluation Framework to a new or existing structural unit in the Ministry of Education within 12 months of project initiation.

Suggested Timeframe:

12 months from project initiation to project completion.

A proposed Implementation Plan is set out in Chapter 3.

Rationale For Recommended Action

The Oman education system has had a range of experiences in self evaluation. These include:

- School and Ministry staff engaged in the current school evaluation system (first implemented in 2003).
- Ministry staff participation in previous external studies, including the World Bank study in 2011.
- Ministry staff participation, as Technical Committee members, in this Education Evaluation Project.
- Schools, Governorates and Ministry Departments engagement in self evaluation trials implemented under the this Education Evaluation Project.

There is an opportunity to utilise Ministry staff that have been engaged in this range of self evaluation experiences to conduct further pilots to refine and embed a self evaluation framework that spans all staff within the Ministry, i.e. in schools, Governorates and Ministry Departments.

International best practice has highlighted that high levels of self awareness within education systems is a powerful tool to enable appropriate responses to issues and challenges, and assist in making systems self correcting. In order for all components and levels of a system to gain high levels of awareness, an efficient and effective response mechanism is the availability of appropriate tools, guidance and support from the Ministry of Education that enable a critical self assessment of performance.

Within systems thinking, there are well established system archetypes of 'shifting the blame' or a natural human tendency to shift responsibility for low performance to external factors outside of an individuals control. A self evaluation framework, when effectively implemented focuses individuals on responsibility for their own performance, and changing their own behaviour and the factors under their control to better align with the desirable features of a well performing system.

By internalising, rather than externalising responsibility for student performance through the provision of information and tools, people within the system are given opportunities for professional development and personal growth that will have a positive impact upon student achievement.

Considerations To Be Taken Into Account In Implementing The Action

As part of the Education Evaluation Project the Project Team designed and conducted an initial trial of a self evaluation framework for schools and Ministry departments.

The trial involved:

- Twenty two schools from seven governorates.
- Three governorates.
- Six Ministry departments across three Directorates.

The self evaluation framework trials for schools, Governorates and Ministry participants were designed to focus participants on two key questions:

- How well are we performing?
- How do we know?

A series of self evaluation framework tools were developed aimed at assisting participants to address these self evaluation questions.

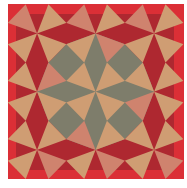
The self evaluation framework tools included:

- A guide to the characteristics of a high performing school.
- A guide to the characteristics of a high performing ministry department.
- Student online survey.
- Mathematics and science diagnostic tools based on publicly released TIMSS items.
- Teachers online survey.
- School administrators online survey.
- Ministry staff engagement survey.
- Ministry capability survey for senior Ministry administrators.

The self evaluation framework trails assisted the Education Evaluation Project Team in:

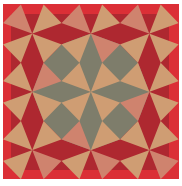
- Designing and testing the evaluation tools used to gather and collect data and information in the evaluative study phase of the Education Evaluation Project.
- Gain an understanding of the range of issues and challenges to investigate in the evaluative study phase of the Education Evaluation Project.

There is now the opportunity to utilise the staff, tools and initial participants to move to a pilot of the self evaluation framework trialed in the Education Evaluation Project.



CHAPTER 3

IMPLEMENTATION PLAN



The Terms of Reference for the Ministry of Education Evaluation of the Education System (Grades 1-12) set out the following deliverables for the project:

The final report at the end of the consultancy will include recommendations with responsibilities for taking forward, priority actions, detailed action plans with timings for their delivery, and procedures to promote sustainability.

Background

A system that is functioning well knows what its business is and is unified in its approach to this objective. All areas of the organisation are clear in their understanding of their contribution to the business objective and also understand the part each plays in improving the outputs of the system. This is not a small responsibility and so it is necessary to have clear aims and goals that everyone at every level of the system is striving to meet, and a clear understanding of the initiatives being undertaken to achieve these goals.

As noted in Chapter 2, to address the challenges it has identified, the Ministry has already responded with a range of initiatives that will provide solutions to many of the most critical issues.

These include the following potentially transformational projects:

- Establishment of an Education Law.
- Curriculum Standards.
- School Performance Evaluation Centre Project.
- Specialised Centre for Professional Training of Teachers.
- Assessment Centre (including Statistical Analysis and Research Capability and an Online Platform for Assessment).
- Financial Management Information System.

These are classified as transformational projects based on their:

- Critical importance to how the Ministry functions.
- Scale and duration.
- Profound impact on the way the Ministry operates if successfully implemented.

The Consortium has recommended that the following actions are also implemented to support the successful implementation of the current transformational project in place:

1. Establish a Ministry of Education Project Management Unit (PMU).
2. Reform the Ministry of Education Policy Development Process.
3. Establish a Ministry of Education Data Management Strategy.
4. Establish a Ministry of Education Communications Unit.
5. Implement a Self Evaluation Framework Pilot.

The table below shows current transformational initiatives as well as the suggested new initiatives and how they impact Ministry functions in terms of:

- Infrastructure.
- Policy.
- Process.
- Practice.

Key to Project Table:

Current	●	Already budgeted and implementation underway		
New	●	Recommended by the Evaluation Project		
Status	◆	Already started	◆	In progress to start shortly
Infrastructure		Changes will be required to the physical operational functions of all or some business entities within the system (e.g. Directorates, Departments, Governorates, Schools)		
Policy		Strategic and operational policy within the Ministry will change		
Process		Business processes of the Ministry will change		
Practice		Operational implementation of business as usual functions within the Ministry will change (e.g. teacher practice, management systems)		
Time		Requiring over one year or more for full implementation		

Table 3.1 **Project Table**

Progress	Transformational Project	Status					
●	Education Law	◆		✓	✓	✓	✓
●	Curriculum Standards	◆		✓	✓	✓	✓
●	School Performance Evaluation Centre Project	◆	✓	✓	✓	✓	✓
●	Specialised Centre for Teacher Training	◆	✓	✓	✓	✓	✓
●	Assessment Centre	◆	✓	✓	✓	✓	✓
●	Financial Management Information System	◆	✓	✓	✓	✓	✓
●	Programme Management Unit	◆	✓		✓	✓	
●	Policy Development Review	◆		✓	✓	✓	✓
●	Data Management Strategy	◆			✓	✓	
●	Communications Unit	◆	✓	✓	✓	✓	
●	Self Evaluation Framework Pilot	◆			✓	✓	✓

This is a significant list, capturing a body of work that will take the next two to three years to fully implement and five years before the effects on the system are realised and benefits start to become measurable. It is an important and daunting programme of projects, carrying significant risk, however it will bring substantial benefits if successfully implemented.

These projects need to be managed carefully. Change impacts on and threatens the status quo of business as usual. In managing change the Ministry will need to be clear on the current situation and why it requires immediate action. Managing the change process and communicating the reasons and impacts of change will be a considerable body of work. It will need to be managed effectively to ensure those resistant to change are not left behind and those involved in the change are fully supportive of the reasons for change. It also needs to be implemented within the context of "business as usual" as all other Ministry functions will need to continue as usual. The impacts on the system will need to be monitored closely, and the cohesion between projects managed, to ensure integration and inter-operability. This will assist in minimising the duplication of work, and ensure efficient implementation of the improvements.

The Consortium has recommended initiatives that will interact with and support the implementation of the existing transformational projects.

This interaction is captured in the table below.

Table 3.2 **Interaction and integration required of proposed new projects with existing projects**

	Project Management Unit	Policy Development Review	Data Management Strategy	Communications Unit	Self Evaluation Framework Pilot
Education Law	✓		✓	✓	
Curriculum Standards	✓	✓	✓		✓
School Performance Evaluation Centre Project	✓	✓	✓	✓	✓
Specialised Centre for Teacher Training	✓	✓			✓
Assessment Centre	✓	✓	✓	✓	✓
Finance Systems Review	✓	✓	✓	✓	

3.1 Project Management Unit Action Plan

Consortium Recommendation One

Establish a Ministry of Education Project Management Unit (PMU)

Description

It is recommended that:

- The Ministry of Education initiates a project to establish a PMU.
- The PMU is allocated responsibility for current major initiatives and new major initiatives implemented by the Ministry.
- The PMU reports to a Supervisory Committee consisting of the Ministry Under Secretaries.
- The key deliverable of the PMU project is the establishment of project management functions within a new or existing structural unit in the Ministry of Education.

Key Objectives

The PMU project is aimed at ensuring the successful completion (within scope, time and budget constraints) of Ministry projects by:

- Managing and maintaining a project management process framework within which Ministry projects operate.
- Coordinating projects that have related outcomes and require interaction and cooperation during implementation.
- Ensuring that momentum is maintained across the portfolio of projects.
- Gaining approval for a plan to move the project management functions to a new or existing structural unit in the Ministry of Education within 12 months of project initiation.

Suggested Timeframe:

12 months from project initiation to project completion.

1: PROJECT MANAGEMENT UNIT (PMU)		
Project Phase	**Key Activities**	**Outputs/Milestones**
Technical Team Established **Rationale:** The PMU is established to implement Evaluation Review recommendations	**Activities** ■ Meet with Minister and Under Secretaries. ■ Confirm PMU scope & Terms of Reference. ■ Agree deliverables and approval processes. ■ Decide PMU Team Members. ■ Technical Team Leader appointed. ■ Governance agreed. ■ Agree resources required and facilities needed.	**Milestone** ■ Senior Management Team of PMO appointed. ■ Team Members agreed. ■ Ministerial Decree issued.
Technical team – initial training (generic)	**Activities** ■ PMU Team reviews Evaluation recommendations and action plan. ■ Determine work plan in detail for the next 6 months. ■ Prioritise initiatives. ■ Allocate tasks and resources to work plan.	**Outputs** ■ PMU has very clear understanding of the work required. ■ Areas of particular team member expertise are identified. ■ Team Outputs agreed.

PMU Operations Start	**Activities**
	
	■ Technical Team formed.
	■ Offices/equipment/administration, etc., established.
	  ■ Phones.
	  ■ Computers.
	  ■ Printers.
	  ■ Wi-Fi.
	  ■ Administrators.
	■ Terms of team membership agreed:
	  ■ Induction training.
	  ■ Days of work.
	  ■ Hours of work.
	  ■ Incentives.
		Outputs
		
		■ PMU Office is initiated as a project.

1: PROJECT MANAGEMENT UNIT (PMU)

International PMU Transition Manager recruited **Rationale:** The PMU Transition Manager will provide guidance for the initial 6 to 10 months of the project to assist in providing leadership, capacity building and embedding PMU strategic objectives	**Activities** ■ Recruitment of International PMU Transition Manager. ■ Job Description & person specification written. ■ Selection criteria are determined and selection panel agreed. ■ Ideal candidates are identified. ■ Suitable candidates are interviewed. ■ An offer is made to the best applicant.	**Milestone** ■ Specification is agreed. ■ Budget is approved. ■ Job is advertised and recruitment process completed.
PMU Transition Manager In place	**Activities** ■ Contract conditions & start date agreed with International PMU Transition Manager.	**Milestone** ■ International PMU Transition Manager engaged. ■ Starts work & joins PMU Senior Management Team.
Team Development Goals Set	**Activities** ■ Each Team member is interviewed by the PMU Senior Management Team to identify professional development and learning goals of the team member. ■ Each Team Member creates a personal development plan which is presented to the Senior Management Team for approval and approval.	**Outputs** ■ Individual development plans are agreed and determined for each member of the PMU Team. ■ A range of training/coaching /mentoring goals to develop members and a timeline for implementation is agreed. Examples of training: ■ Project Management. ■ Facilitation. ■ Data Analysis, etc..
Work Plan Initiated	**Activities** Review and Evaluation.	**Outputs** The PMU determines the current state of all existing projects and transformational initiatives within the Ministry.
Workshops with Internal Stakeholders	**Activities** Meeting of all Internal Ministry Transformational Project stakeholders to explain role of the PMU going forward.	**Outputs** A stakeholder engagement plan for developing an interface across projects is developed.
Self Evaluation Framework Project	**Activities** The PMU begins work on the setup of the Self Evaluation Framework Project	**Outputs** (Refer Self Evaluation) Framework Project Implementation Table

1: PROJECT MANAGEMENT UNIT (PMU)

Data Management Strategy Project	**Activities** The PMU begins work on the setup of the Data Management Strategy Project.	**Outputs** (Refer Data Management) Strategy Project Implementation Table
Agree and mandate PMU role across Transformational Projects for all of Ministry	**Activities** ■ Report back to internal stake-holders from workshop, providing operating parameters for: ▪ Oversight. ▪ Reporting. ▪ Management. ▪ Monitoring of projects going forward.	**Milestone** Common reporting structure for programme of projects approved.
Policy Development Review Project	**Activities** The PMU begins work on the setup of the Policy Development Review Project.	**Outputs** (Refer Policy Development) Review Project Implementation Table
Communications Unit Project	**Activities** The PMU begins work on the setup of the Communications Unit Project.	**Outputs** (Refer Communications Unit Project) Implementation Table
On going	**Activities** MThe PMU continues until the end of 2014 managing Ministry transfor-mational projects, as a role model for Ministry operations, developing an environment of continuous improve-ment as integral to the organisation's culture. Team member capacity & capability is built through on going professional development.	**Outputs** Capacity of the PMU continues to grow and capability of team members shows progressive improvement.
Review and Evaluation of PMU	**Activities** The Ministry implements a review and evaluation of the effectiveness of the PMU work to date, how successful its activities have been and what achieve-ments have been made.	**Milestone** Review provides evidence for continuing the PMU role and a proposal for the location of the PMU within the Ministry organisa-tion structure.

3.2 Reform of Policy Development Action Plan

Consortium Recommendation Two

Reform the Ministry of Education Policy Development Process

Description

It is recommended that:

- The Ministry of Education undertakes a review of its current policy development processes and the organisational and committee structures associated with policy development.
- The review be established as a project under the responsibility of the newly established PMU (Recommended Action One).

Key Objectives

The review of policy development is aimed at clarifying, consolidating and standardising policy development processes by:

- Establishing a policy framework for policy decisions.
- Removing and/or minimising existing overlaps in function between existing Ministry structures (Directorates/Departments/Sections or Committees).
- Allocating key accountabilities and responsibilities for policy development in an efficient and effective manner.

Suggested Timeframe:

9 months from period initiation to project completion.

2: POLICY DEVELOPMENT REVIEW		
Project Phase	**Key Activities**	**Outputs/Milestones**
Initiation of Project	**Activities** ■ Meet with Under Secretaries. ■ Confirm project and assignment scope. ■ Agree deliverables and approval process. ■ Agree external and any third party contacts.	**Outputs** ■ Confirm any work done to date on this project and status (e.g. complete, in progress).
Mandate for Policy Review	**Activities** ■ Provide detailed project and assignment scope. ■ Provide deliverables. ■ Provide list of external and any third party contacts.	**Milestone** ■ Ministerial Decree issued for Policy Review.
Project Planning and Initiation & Stakeholder Consultation	**Activities** ■ Agree project governance/roles. ■ Prepare high-level project work plan. ■ Set workshop dates. ■ Set up required interviews for initial phases.	**Outputs** ■ Agreement and schedule for workshop dates. ■ Stakeholders contacted and interviews planned.
Current State Review **Rationale:** To identify the change drivers and principles that should inform policy process designs.	**Activities** ■ Identify current 'building blocks'. ■ Develop key change statements from existing versus new (people, process, technology, and infrastructure). ■ Identify solution benefits and risks. ■ Hold confirmation workshops.	**Outputs** ■ Summary of current issues and root cause analysis. ■ Capture resources that make up 'As-Is' policy processes. ■ Establish future benchmarks for performance.
Policy Framework Design **Rationale:** To develop a view of the future that brings together major themes; and to frame the context, direction, and bounds for the future workflow model of Ministry policy development.	**Activities** ■ Identify future 'building blocks'. ■ Develop key change statements from existing vs. new (people, process, technology, and infrastructure). ■ Identify solution benefits and risks. ■ Hold confirmation workshop.	**Outputs** ■ A conceptual model that communicates key elements to be included in the future policy development model.

2: POLICY DEVELOPMENT REVIEW

High Level Process Design
 	
Rationale:
 	
To develop a set of future high-level workflow processes, and to identify key changes anticipate with the future design.
	Activities
	
	■ Map core process steps through workflow process design workshops.
	  ■ Major steps & control points.
	  ■ High-level outcomes required.
	■ Identify required changes to Ministry policy process.
		Outputs
		
		■ High-level workflow process diagrams and templates with required policy outcomes for each major process step.
		■ Summary of required changes with a 'gap' rating and suggestions for closing the gap.

Design Programme of Improvement **Rationale:** To develop continuous improvement programme including change management proposal.	**Activities** ■ Range of training/coaching/mentoring is given to Ministry staff, to develop an environment where a continuous improvement environment is part of the organisation's culture.	**Milestone** ■ New policy process is in agreed. ■ New policy process implementation plan agreed and initiated. ■ Ministry is positioned to deliver better, smarter services.

3.3 Data Management Strategy Action Plan

Consortium Recommended Action Three

Establish a Ministry of Education Data Management Strategy

Description

It is recommended that:

- The Ministry of Education initiates a project to establish a Data Management Strategy.
- The project is established under the responsibility of the newly established PMU (Recommended Action One).

Key Objectives

The Data Management Strategy is aimed at ensuring the education system data is accurate, accessible, and effectively used in a timely manner by:

- Establishing a Ministry of Education Data Management Strategy.
- Removing and/or minimising overlaps in function between existing Ministry structures and/or new initiatives underway (Directorates/Departments/Sections).
- Allocating key accountabilities and responsibilities for data management, analysis and publishing in an efficient and effective manner.

Suggested Timeframe

7 months from project initiation to project completion.

3: DATA MANAGEMENT STRATEGY

Project Phase	Key Activities	Outputs/Milestones
Plan Data Management Strategy RFP Project	**Activities** ■ PMU to prepare project scope, roles and draft TORs reflecting Evaluation Report recommendations. ■ Meet with Minister and Under Secretaries. ■ Confirm project scope. ■ Agree deliverables from Data Management Strategy Project.	**Outputs** ■ Agree Terms of Reference for Data Management Strategy Project. ■ High level work plan for Data Management Strategy drafted.
Mandate for Data Management Strategy Review	**Activities** ■ Meet with Minister and Under Secretaries. ■ Provide detailed project and assignment scope. ■ Provide deliverables. ■ Provide list of external and any third party contacts.	**Milestone** ■ Ministerial Decree issued for Data Management Strategy Project.
Identify overlapping data functions and infrastructure both current and planned within the Ministry and determine how data functions can be best integrated	**Activities** ■ The PMU will determine where other data functions exist within the Ministry. ■ Meet with other internal stakeholders to gain an overview of: What data is collected?; For what purpose?; Data origins. ■ Evaluate if any external stake-holders around e-Govt. should be consulted.	**Outputs** ■ Current state of Ministry data collection and management is established.
Workshop of all existing Ministry data gathering stakeholders to determine perceived best way forward for interface and integration with the Data Management Strategy	**Activities** ■ The PMU will prepare high-level project work plan for internal stakeholder consultation. ■ Agreement and schedule for workshop dates.	**Outputs** ■ Stakeholders attend Workshop.

3: DATA MANAGEMENT STRATEGY

Determine RFP Requirements for Data Management Strategy Project	**Activities** ■ Consultation information from internal data stakeholders is used to prepare an RFP for Tender. ■ Develop draft budget for RFP. ■ Develop RFP Terms of Reference.	**Milestone** ■ RFP for Data Management Strategy is sent to Procurement for circulation.
Tender Process	**Activities** ■ Selection criteria and RFP performance weightings are decided. ■ Tenders are received and circulated to selection committee for consideration. ■ Assessment is moderated. ■ Best candidates are selected and offered the contract.	**Outputs** ■ The RFP process enables selection of the best candidate for the job. ■ Best candidate/company for the job starts work.
Consultant Implements RFP	**Activities** ■ PMU assists and monitors delivery of RFP by consultant. ■ A priced implementation plan for the effective and efficient management of data that integrates all Ministry data functions is produced. ■ It includes a design Programme of improvement for data analysis and management interfacing with all existing and future data requirements of the Ministry.	**Outputs** ■ Work is on time on budget and meets deliverables.
Data Management Strategy Implemented	**Activities** ■ The completed work and recommendations of the consultant are implemented. ■ Training of key identified people to continue the management of the data infrastructure takes place.	**Outputs** ■ The data management strategy implemented. ■ People are trained to work with the strategy.
KPIs using data are used as integral to Ministry performance management	**Activities** ■ Data is used regularly to determine how well the education system is performing by analysing comparative data from all data collection interfaces.	**Milestone** ■ Ministry is positioned to deliver better, smarter data services that provide the basis for measuring Ministry performance against KPIs.

3.4 Communications Unit Action Plan

Consortium Recommended Action Four

Establish a Ministry of Education Communications Unit

Description

It is recommended that:

- The Ministry of Education undertakes a review of its communication functions requirements and associated delivery mechanisms.
- Based on the review findings of the required functions the Ministry of Education establishes a Communications Unit.
- The review be established as a project under the responsibility of the newly established PMU (Recommended Action One).

Key Objectives

The Communications Unit project is aimed at clarifying, consolidating and standardising communication function by:

- Identifying the Ministry of Education's required communications functions.
- Establishing a Communications Unit to deliver approved functions.
- Removing and/or minimising existing overlaps in function between existing Ministry structures (Directorates/Departments/Sections).
- Allocating key accountabilities and responsibilities for communications functions in an efficient and effective manner.

Suggested Timeframe:

5 months from project initiation to project completion.

4: COMMUNICATIONS UNIT		
Project Phase	**Key Activities**	**Outputs/Milestones**
Conceptual Scope and Role of the Communications Office Determined	**Activities** ■ PMU to prepare project scope, roles and draft TORs reflecting on Evaluation report recommendations. ■ Meet with Minister and Under Secretaries. ■ Confirm project scope. ■ Agree deliverables for Communications Unit and its functions.	**Milestone** ■ Agree Terms of Reference & functional scope of the Communications Unit. ■ Affirm PMU role to take initiative forward. ■ Approval given by Minister to initiate project.
Identify overlapping communication functions within the Ministry and determine how functions can be best integrated	**Activities** ■ Determine where communications functions exist within the Ministry and determine best way to consolidate functions into a single unit. ■ Prepare high-level project work plan. ■ Develop draft budget for Communications Unit.	**Outputs** ■ High level business case for Communications Unit drafted. ■ Governance Committee signs off on high level plan.
Project Planning	**Activities** ■ PMU details a project plan and work specification for the Communications Unit. ■ Human Resource requirements determined and job specifications created. ■ Confirm Communications Unit Project scope & TOR. ■ Agree deliverables and approval processes.	**Outputs** ■ Detailed business plan for Communications Unit presented.
Communications Unit	**Activities** ■ Meet with Minister and Under Secretaries. ■ Confirm PMU scope & TOR. ■ Present detailed business case.	**Milestone** ■ Ministerial Decree issued for establishment of the Communications Unit.

4: COMMUNICATIONS UNIT

Communications Director recruited
 	
Rationale:
 	
The Communications Director will drive the future development of the Communications Unit, providing leadership, capacity building and embedding Communications Unit strategic objectives.
	Activities
	
	■ Recruit Communications Director.
	  ■ Job description & person specification approved.
	  ■ Selection criteria determined and selection panel agreed.
	  ■ Ideal candidates are identified.
	  ■ Suitable candidates are interviewed.
	  ■ An offer is made to the best applicant.
		Outputs
		
		■ Specification is agreed.
		■ Budget is approved.
		■ Job is advertised and recruitment process completed.

Communications Director in place	**Activities**
	
	■ Contract and conditions agreed with Communications Director.
	■ PMU runs induction for the Communications Director with specific reference to:
	  ■ Transformational projects.
	  ■ Visions and unity of messages.
		Milestone
		
		■ Communications Director engaged and starts work.

Communications Unit Operations Start	**Activities** ■ PMU assists the Communications Director with the establishment of offices/equipment/administration established.	**Milestone** ■ Communications Unit is operational.
Recruit staff to bring Communications Unit to full complement	**Activities** ■ The PMU will assist the Communications Director with development of a full implementation plan for the Communications Unit.	**Outputs** ■ Human Resource plan devised. ■ Persons specifications determined.
Communications Unit fully operational	**Activities** ■ All staff have been recruited and inducted and full office capability and capacity is in place.	**Milestone** ■ Communications Unit fully operational.

3.5 Self Evaluation Framework Action Plan

Consortium Recommendation Five

Implement the Self Evaluation Framework Pilot

Description

It is recommended that:

- The Ministry of Education initiates a project to pilot the Self Evaluation Framework developed in the Education Evaluation Project.
- The project is established under the responsibility of the newly established PMU (Recommended Action One).

Key Objectives

The Self Evaluation Framework Pilot is aimed at increasing the capability and capacity of the education system to create a permanent state of on-going evaluation of all aspects of its education system by:

- Implementing the Self Evaluation Framework across a selected sample of schools in association with relevant staff for Governorate and Ministry Directorates.
- Using the pilot schools to identify, test and trial data and information generated from the Data Management Strategy Project.
- Using the pilot schools to identify, test and trial data validation and verification processes generated from the Data Management Strategy Project.
- Gaining approval for a plan to move the operational management of the Self Evaluation Framework to a new or existing structural unit in the Ministry of Education within 12 months of project initiation

Suggested Timeframe:

12 months from project initiation to project completion.

5: SELF EVALUATION FRAMEWORK

Project Phase	Key Activities	Outputs/Milestones
Evaluation Framework Project	■ PMU to prepare and confirm Project TORs reflecting on Evaluation report recommendations. ■ Meet with Minister and Under Secretaries. ■ Confirm project scope and implementation plan. ■ Agree deliverables and approval processes.	■ Affirm PMU role to take project forward. ■ Mandate & sign off plan for commencement.
Project Plan	**Activities** ■ Detailed project plans for implementing the Self Evaluation Framework created. ■ A review of existing team capability in facilitation techniques, interview and stakeholder engagement skills is undertaken. ■ A review of past work and successful criteria for working with schools is used as a basis for determining the criteria for pilot schools for this project.	**Outputs** ■ Project plan completed. ■ Team member professional development is determined. ■ Criteria for the involvement of schools is confirmed.

Training of PMO Team	**Activities**
	■ Team member professional development is provided against needs.
	■ Examples of training:
	  ■ Project Management.
	  ■ Facilitation.
	  ■ Data Analysis.
	■ Each Team Member is assessed and signed of as ready to work with stakeholders.
		Outputs
		■ PMU Team members are ready for assigned roles.

5: SELF EVALUATION FRAMEWORK

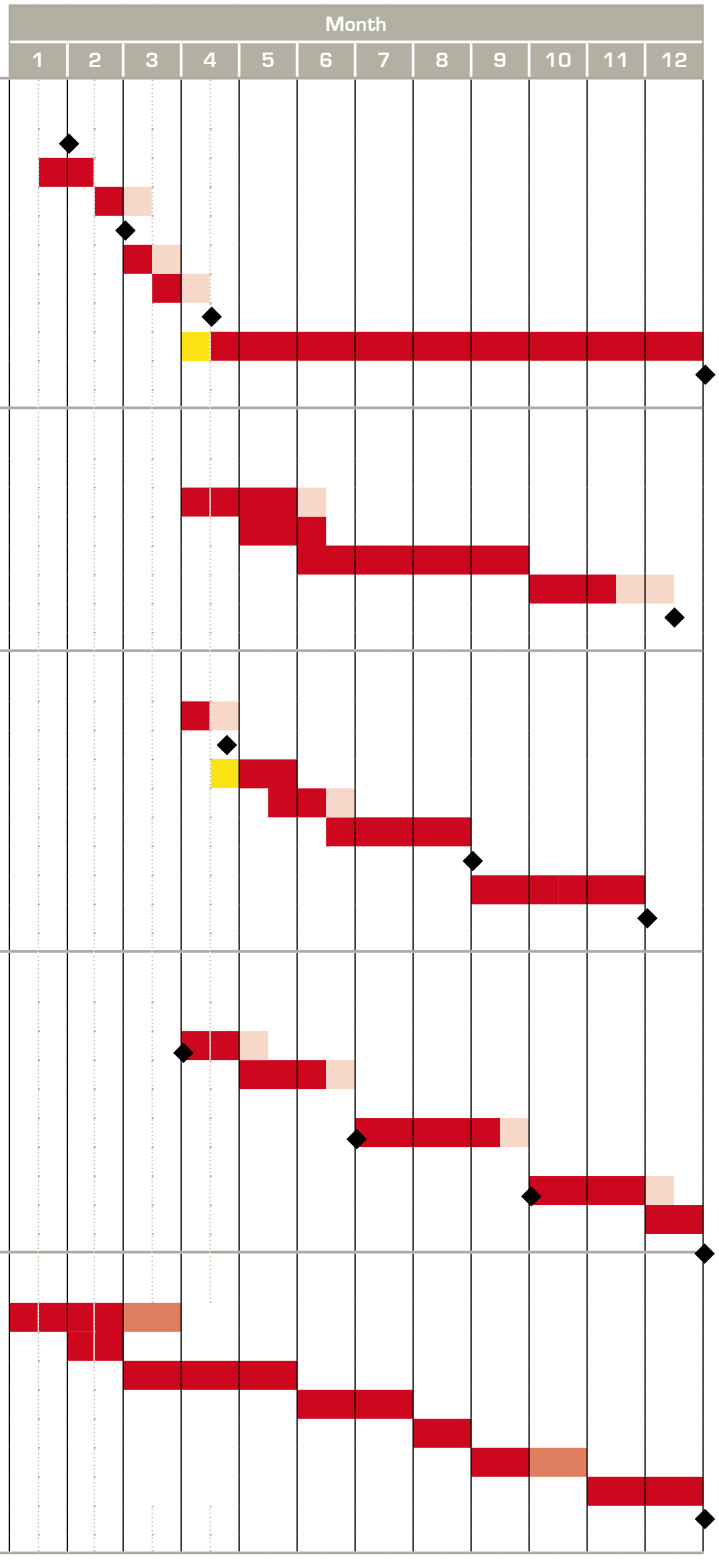
Schools Involvement	**Activities** ■ PMU invites selected schools for involvement in Self Evaluation Framework Project.	**Outputs** ■ Schools involved in Pilot Project are agreed.
Resources	**Activities** ■ Existing survey tools, probes and pro-forma information relevant to schools from the Education Evaluation Project are reviewed against needs to determine what modification and improvement is required and changes are made as necessary.	**Outputs** ■ Schools Self Evaluation Framework, tools probes and surveys are complete.
Engagement	**Activities** ■ School profiles for participating schools from e-portal data and other data sources are created. ■ Timeline for engagement and logistics for reaching schools is completed. ■ Initial surveys and data sets are completed and sent to schools with information on next phase of engagement.	**Outputs** ■ School profiles complete. ■ Timeline agreed.
First Workshops	**Activities** ■ First 2 day workshops are implemented with participating schools. ■ Results are gathered and feed back given to schools.	**Outputs** ■ Schools involved in project complete 2 day workshops.
Data Analysis	**Activities** ■ Data is returned to PMU and aggregated to create data sets for all schools against data analysis criteria. For example: ▪ Governorate. ▪ School type. ▪ Grades. ■ Data set determines performance, and analysis is carried out as to what learning and improvement can be reflected back to schools. ■ Information is prepared to reflect back to schools.	**Outputs** ■ Schools data shows performance of schools against total sample set.

5: SELF EVALUATION FRAMEWORK

Second Workshops	**Activities** ■ Second 1 day workshops are implemented with participating schools ■ Feedback is given and discussion facilitated on: ▪ Where the school is performing well ▪ Areas for improvement ■ PMU leads discussion and facilitation to assist school to write an action plan for improvement reflecting on learning ■ Date is set for cluster/network meeting	**Outputs** ■ Schools have information to create an action plan ■ A date is set for the action plan to be presented to the PMU and other schools
Schools Cluster Meeting	**Activities** ■ Participating schools are brought together to share action plans, discuss progress so far, gain assistance for problems, and network with schools involved in project ■ Further training is given on how schools can utilise data to set performance goals for their schools, teachers and students ■ High performing schools are given recognition as champions and are used as cluster leaders to support on going work	**Outputs** ■ Clusters of schools are formed to form a network that will support their involvement in the Evaluation Project ■ High achievement is rewarded with recognition
Monitoring and Support	**Activities** ■ Participating schools are provided with support through visits, phone and internet to support on going work	**Outputs** ■ On going support is given to ensure motivation is high
Evaluation	**Activities** ■ The Ministry implements a review and evaluation of the effectiveness of the Self Evaluation Framework work to date, how successful its activities have been, and what achievements have been made	**Milestone** ■ Review provides evidence for continuing the Self Evaluation Framework and a proposal for the location of the Self Evaluation Framework within the Ministry organisation structure

3.6 Overview of Implementation Plan

Key to Activities: Planned activity | Possible slippage | Earlier Start Date Possible | Ongoing Work

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SECTION 2

SYSTEM PROCESSES EVALUATION

CHAPTER 4

GOVERNANCE & ADMINISTRATION

The Terms of Reference for the Ministry of Education Evaluation of the Education System (Grades 1-12) set out the following component for the evaluation of the Governance & Administration aspect:

- Documentation relating to the present philosophy of education.
- Appropriateness and effectiveness of present procedures, indicators and data collection methods to assist in monitoring and evaluating the quality of the system.
- Appropriateness and effectiveness of present policy-development system
- Present organisational structure within the Ministry of Education. Proposals on the role and governance of bodies within the Ministry are to be provided.

Summary

Governance is the key decision-making system that supports the Oman education system. Members of education governance teams are responsible for setting the high level framework and monitoring mechanisms for education.

The Consortium review of the governance and administration components of the Oman education system has factored in the cultural context within which the wider Omani Government and public service operates. Administration practices within the Oman Ministry of Education are defined by the civil service regulations. The organisation has highly complex administrative processes and functions, which makes parts of the system slow and cumbersome to administer.

The Ministry of Education is comprised of central directorates and regional, Governorate offices. The Ministry of Education has been identified as a typical bureaucracy, that is a hierarchical organisation that is structurally heavy, organised into discrete groups with specific tasks and functions. The model of the central Ministry of Education is duplicated in the Governorate offices.

The Consortium reviewed international best practice governance models for education, undertook an extensive literature review and reviewed the education governance and administration mechanisms against international benchmarks. The review found that the system was aware of the issues and challenges within the system, as demonstrated by the slow nature of responding to issues and challenges.

The Consortium recommends that the Oman Ministry of Education adjusts its current governance settings and focuses on incorporating and developing four key principles - accountability, clarity, efficiency and effectiveness, into its governance structures. These principles will help guide the approach and priorities for strategy and policy decisions. Incorporating these key principles will build capability and effectiveness within existing governance structures rather than representing a radical change to the system.

In practice, policy, planning, information management and communications are key areas of the Ministry of Education that have been identified as needing strong strategic leadership and oversight. By adjusting governance mechanisms to focus on these areas, the Consortium anticipates a greater coherence can be brought to the education system, and efficiencies gained through alignment and synergies of the major education initiatives that are planned.

4.1 Introduction

This section focuses on education governance and administration. In its broadest sense the term 'governance' is often used to refer to the exercise of power by a government over the economic and social resources of a nation. However, the term is also used to refer to the overall decision-making system and the processes that set the framework and monitors the performance and outcomes of any sector of government, business or organisation.

Using the latter definition, a governance framework is provided in this section that is consistent with international best practice in education governance, and is relevant to the way education is administered in Oman. This governance framework will be a tool for organising the findings from the evaluation of the Oman school system.

4.2 Governance and Administration Evaluation Methodology

4.2.1 Scope of Governance and Administration evaluation

The work relating to Governance and Administration has been undertaken in conjunction with the evaluation activities in schools. In addition, the Consortium carried out an international literature review and desktop research on Gulf Co-operation Council (GCC) countries and other nations that have undergone educational reform in the past 20 years, to gather lessons learned that might be relevant and useful in the Oman context.

The recommendations on organisational structure made here are high level.

The recommendations on organisational structure made here are high level. They reflect the proposed governance framework that the Consortium considers will best serve the Oman educational agenda to achieve a significant lift in the quality of education.

The Consortium understands that a more detailed review of the organisational structure is planned. The approach to such a review will largely depend on the decisions made in relation to the governance recommendations in this report. Once a governance framework is agreed, it will determine the most appropriate organisation of functions within the Ministry to support the lift in quality across the education sector.

4.2.2 Information gathering and analysis

To meet the Terms of Reference for the Governance and Administration, the Evaluation Project Team took a broad approach to information and data gathering. This enabled them to gather as much information as possible about current education sector governance in Oman. Their approach included:

- Reviewing international best practice in educational governance arrangements.
- Setting out the key principles and practices of world-leading governance exemplars.
- Assessing the current position and performance of the Oman education system in respect of international governance benchmarks.
- Identifying the principles of governance most relevant to the Oman education system and testing them with key stakeholders.
- Analysing the governance levers most likely to have a substantive impact on lifting the quality of education in Oman.
- Developing a roadmap to achieve the lift in educational quality desired by Oman educational leaders.

Table 4.1, below, sets out the key activities used to gather and analyse the governance data and information.

Table 4.1 Activities undertaken to meet the Terms of Reference

Activity	Method
Information gathering	■ Review of documents on the present philosophy of education in Oman. ■ Review of reports on Oman education governance. ■ Review of key documents relating to the Oman national context and the Oman education sector policies and practices. ■ Review of documentation on expenditure and accounting records in the Oman education sector. ■ Desktop review of key international literature on educational governance arrangements in a range of countries. ■ Interview with New Zealand-based researcher who recently completed an international comparative study of educational reforms in Singapore, Finland, Germany, Canada and the United Kingdom. ■ Review of available documentation on the present structure of the Ministry of Education, including the roles and governance functions of the various structural components of the organisation. ■ Interview with officials from the Finance Directorate on the financial management practices of the Oman education sector. ■ 'Key informant' interviews with Ministry of Education personnel and Omani project members. ■ Review of Ministry of Education policy and planning functions.

Activity	Method
Analysis of governance issues	■ Collation of international studies and thematic analysis to create a 'best governance practice' framework. ■ Application of the Weberian* typology of bureaucracy to identify the Oman civil service's mode of operating, as a basis for evaluating the relevance of international educational governance to the Oman context. ■ A matrix of key governance principles against common international governance levers for change. ■ Evaluation of key practices in the Oman education system against the analytical matrix. ■ Mapping of steps required for Oman educational governance arrangements to become world-leading best practice. * Max Weber (1922) produced an internationally recognised governance framework for civil service (bureaucracy).

4.2.3 Limitations on evidence and data inputs to evaluation

The international literature review was primarily a desktop exercise. Some information was provided by NZ Initiative, a New Zealand-based research company, on research recently carried out in a small number of countries. This is pre-publication data provided as a professional courtesy that is not yet publicly available. While the Consortium has used this data as a contribution to making judgments about international governance best practice, it is not authorised to formally reference the details of this material until it is published in New Zealand.

4.3 Oman Education Sector Contextual Considerations

4.3.1 Oman governance structures

There are three levels of governance that relate to, and have a substantive impact on, the way that education is delivered in Oman:

Meta-governance: the ruling system

Oman operates as a monarchy. A decree from His Majesty Sultan Qaboos bin Said al Said is required before any major system change can occur.

Meso-governance: the government system

The State Council Education Committee and Al Shoura Council Education Committee study and give opinion on educational policies, plans, programmes, research, systems and law. The Education Council sets the strategic direction and the overarching education policy for all education types and stages. The Minister of Education has been appointed by the Sultan to oversee the implementation and delivery of Grade 1 to 12 educational services to the people of Oman.

Key Functions of the Education Council from its Terms of Reference, Royal Decree No. 48/2012

- Set the overarching education policy including all education types and stages and guide the education process in line with the public policy of the State and sustainable development requirements and to achieve the cultural, social, scientific and economic objectives of the Sultanate and monitor the implementation of that policy.
- Set an education strategy within the framework of the public policy of the State in cooperation with other concerned authorities and to monitor the implementation of that strategy.
- Monitor and evaluate the education quality in all stages and types and take due actions to ensure quality of the outcomes.
- Review and develop education plans, programmes and policies in line with different changes and in consistency with the public policy of the State.
- Develop policies and appropriate mechanisms to achieve connectivity and integration between education outcomes in all education types and stages including applied, technical and vocational education.
- Review and develop curricula, pedagogical programmes, examination and assessment policies, administration and supervision methods.
- Supervise the Oman Academic Accreditation Authority within the framework of the provisions of the Royal Decree No. 54/2010.
- Suggest draft laws related to education and monitor and develop the education systems and laws in force.
- Report annually on all types and stages of education and submit that report to the Council of Ministers.

The full text of the Education Council's Terms of Reference are provided in Appendix 3.

Micro-governance: organisational governance

The structure of the Ministry of Education is organised in accordance with a large number of disaggregated functions (refer Appendix 5 for an overview of the Ministry of Education to the section level). For example, there are eight departments with corporate functions; three stand-alone directorates/centres in addition to the Minister's office; and 35 departments of substantive educational functions clustered under nine directorates overseen by the following undersecretaries:

- Undersecretary for Education and Curriculum.
- Undersecretary for Educational Planning and Human Resources.
- Undersecretary for Administrative and Financial Affairs.

This structure is almost entirely duplicated at the regional level across 11 governorates. Roles in each area at a regional level are primarily for the implementation and administration of decisions taken within the Ministry.

Key Functions of the Ministry of Education from its Terms of Reference, Ministerial Decree No. 69/2008

- Research and suggest the educational and pedagogical policy for schooling.
- Develop the educational programmes in accordance with the philosophy of education and national targets within the public policy of the State.
- Provide the school buildings with all its requirements and motivate the citizens and private sector to contribute in supporting educational services.
- Set up draft laws related to schooling and issue executive regulations and decisions.
- Set the plans and projects for implementing the approved educational policy in light of the requirements of economic, social, scientific and technical development.
- Specify the bases and general standards for curriculum development taking into account integration of all curricula in all education stages.
- Set the teaching and learning standards according to educational updates.
- Develop the educational supervision, school administration, career guidance methods at schools.
- Determine the qualification and experience needed to apply for the job of teachers and associated jobs.
- Conduct targeted researches and studies to diagnose the learners' needs and deliver proposals that suit development requirements to improve them.
- Monitor the education system including all its schools and institutions and provide whatever required to keep it operating effectively.

The full text of the Ministry of Education's Terms of Reference are provided in Appendix 4.

4.3.2 The Oman Civil Service

At the level of meso-governance, the education officials who work in the Ministry of Education, the various associated educational committees and councils, the regional offices and the administrators and teachers throughout Oman do so as members of the Oman Civil Service. Oman's civil service is governed by a set of administrative rules and regulations that determine the terms and conditions of employment and conduct within all aspects of government. The education sector is subject to these determinations and does not exist independently. This is an important consideration in designing an approach to lifting the quality of education that is appropriate to Oman.

Unlike many countries around the world at this time, Oman's civil service operates a 'classical' version of Max Weber's (1922) bureaucratic model. The full list of the 14 features of the bureaucratic model is set out in Appendix 7. Key informants accepted that 12 of the 14 features of the bureaucratic model apply in full in Oman, and that two held but had some variations in practice. In this case, core features of the model, such as jobs for life; promotion based on tenure or 'next in line' as opposed to performance; and remuneration based on position status rather than performance, differentiate this practice from other models used internationally.

The influence and impact of the Oman Civil Service as a critical constraining factor must be acknowledged and taken into account when developing a focused and innovative solution to the challenges of lifting educational quality in Oman. The Ministry of Education does not have independent jurisdiction over the agencies that make up the education sector; they are all subject to the rules and regulations of the Oman Civil Service. In striving to achieve greater levels of efficiency and effectiveness in the Oman education sector, solutions that would work in other jurisdictions are not applicable/appropriate, and the Minister must instead look to governance levers that can be adjusted to fit the Oman context.

4.3.3 The structure of the Oman education sector

The Oman education sector can be described as structurally heavy in that it is organised in many discreet groups, each with its own specific role and function.

The Oman education sector can be described as structurally heavy in that it is organised in many discreet groups, each with its own specific role and function. Some of the functions at the Head Office or national level are mirrored at the regional level.

REFERENCE EXAMPLE (1)

The Directorate of Information Technology is a stand-alone function, reporting directly to the Minister of Education. The Directorate is divided into five specific departments: (i) information systems; (ii) technical support services; (iii) network and communications; (iv) education technology; and (v) digital services.

Each of these five departments is duplicated in each of the 11 regions throughout the country, giving a total of 12 groups and 60 individual IT sections.

The number of people in some of these units at the regional level may be small.

The complexity of the whole education sector structure is significant when this duplicated national/regional structure is multiplied across the range of functions at the centre. In practice, the density of this structural arrangement presents a number of challenges for clear and unambiguous governance. It is particularly difficult to ensure that communication lines are clear across the system and that information moves quickly from one section to another. This is an important feature when trying to drive significant changes through a complete system.

4.3.4 Administration of the education sector

The structural heaviness described above contributes to a corresponding density of administrative processes and systems. When this is combined with the requirements of the civil service regulations and controls, it creates administration systems and processes within the education sector that have multiple layers and multiple complexities.

REFERENCE EXAMPLE (2)

A written administrative request made at the local level may need to be cleared through several layers of regional administrators and then forwarded to the Ministry to process.

The Ministry may need to process the request through several layers of managerial decision-makers. Depending on the subject matter of the request, they may also need to check with relevant officials in associated departments with an interest in the matter (e.g. perhaps the Ministry of Finance or the Ministry of Health or the Ministry of Civil Service) before a decision is signed off appropriately. The decision will then be conveyed in writing back down through the regional office to the original requestor.

At the national level of the education service, key informants described this type of bureaucratic processing as slow and cumbersome and they experience it as frustrating and inefficient for individuals and groups. The time and cost of this administrative processing also absorbs funds that could be diverted into initiatives that directly lift the quality of education in Oman.

Managerial discretionary decision-making is limited within the system. Until very recently, and is generally the case still, local schools and regional directorates had no, or limited, ability to manage their own budgets. (As noted in this report's chapter on finance, a pilot to decentralise some components of the budget is being piloted in five regions in 2014.) Staffing decisions are made centrally, as are decisions on curriculum (including textbooks, and number and content of lessons) and core school-management procedures (e.g. contact hours, examinations, transport and so forth).

REFERENCE EXAMPLE (3)

Key informants explained that even minor modifications deep within the organisational structure require either Ministerial or Royal decree to change.

In a practical sense, regardless of the strength of the rationale for change, minor structural and/or procedural adjustments are unlikely to be approved simply because of the onerous logistical requirements necessary to get the requisite decree.

As a result, even when managers see opportunities for administrative efficiencies within his/her area of control, they do not have the authority to make the required changes.

4.4 Current System Responses

4.4.1 System awareness

One of the critical questions the Consortium is seeking to answer is whether there is a level of self-awareness about the weaknesses, key issues and challenges that the education system is facing in Oman. To a large extent, the interviews and document examination undertaken show clearly that players within the system, including managers, officials and administrators, are, for the most part, well aware and able to articulate the challenges they face.

REFERENCE EXAMPLE (4)

IT Directorate officials were able to identify very clearly the opportunities that exist in the education sector for using internet-based tools to improve teaching in classrooms by means of e-content, interactive learning through educational applications and social media, and the use of a range of modern technologies. They understood, and were able to engage in, analysis on the benefits and weaknesses of the incremental development of e-learning processes including blended learning, digital classrooms, and one-to-many teaching modalities.

Officials were also able to articulate very clearly the system challenges they face in implementing IT solutions, such as: difficulties with connectivity; skills and expertise required to develop customised learning content; interoperability of systems and applications; infrastructure in remote communities; and the need to up-skill teachers, students, administrators and managers in the potential of e-learning opportunities and in use of the technologies.

This interview was a primary example of the high level of self-awareness that Omani education officials are able to demonstrate in relation to the existing challenges of their own system.

In trying to develop solutions to these challenges, officials are limited by the very factors they have identified as problems: lack of access to key data; heavy structure; slow and burdensome administrative processing; and a lack of focus and 'ownership' of a change programme. The Consortium observes that the desire of individuals and groups within the system to contribute to change is inhibited by the inability of the system to respond in a timely, coordinated and comprehensive fashion.

4.4.2 System responses

There are a number of initiatives that Oman has undertaken to address key issues in the current education system. These initiatives are specific responses to reports – often written by external parties – that are critical of different aspects of the education system.[1] As such, while they may be worthy initiatives in and of themselves, they collectively represent a fragmented system response to a well-accepted problem: that is, poor student attainment results.

These initiatives include, but are not restricted to:

- Review of Educational Philosophy.
- Drafting new educational law to put in place an enabling framework for the education sector.
- National Qualifications Framework.
- The establishment of a Specialised Centre for Professional Training of Teachers to provide in-house training courses and professional development for existing teachers.
- The establishment of an Assessment Centre to provide robust assessments and a qualification system that is valued and respected both nationally and internationally.
- Curriculum standards development and associated curriculum review.
- Centre Project for School Performance Evaluation.
- New Post Basic learning pathway proposals.
- Decentralising funding to pilot regions for a specified number of functions.
- Piloting e-learning and digital school initiatives.

While these Ministry of Education initiatives above may be successful individually, the Consortium is of the view that to optimise the opportunity for successfully lifting the quality of education in Oman, the initiatives should be integrated and managed in accordance with the framework for change set out in this document.

The Consortium also notes that these Ministry of Education initiatives sit alongside wider education sector (schooling, technical and vocational, and higher education) initiatives that come under the responsibility of the Education Council.

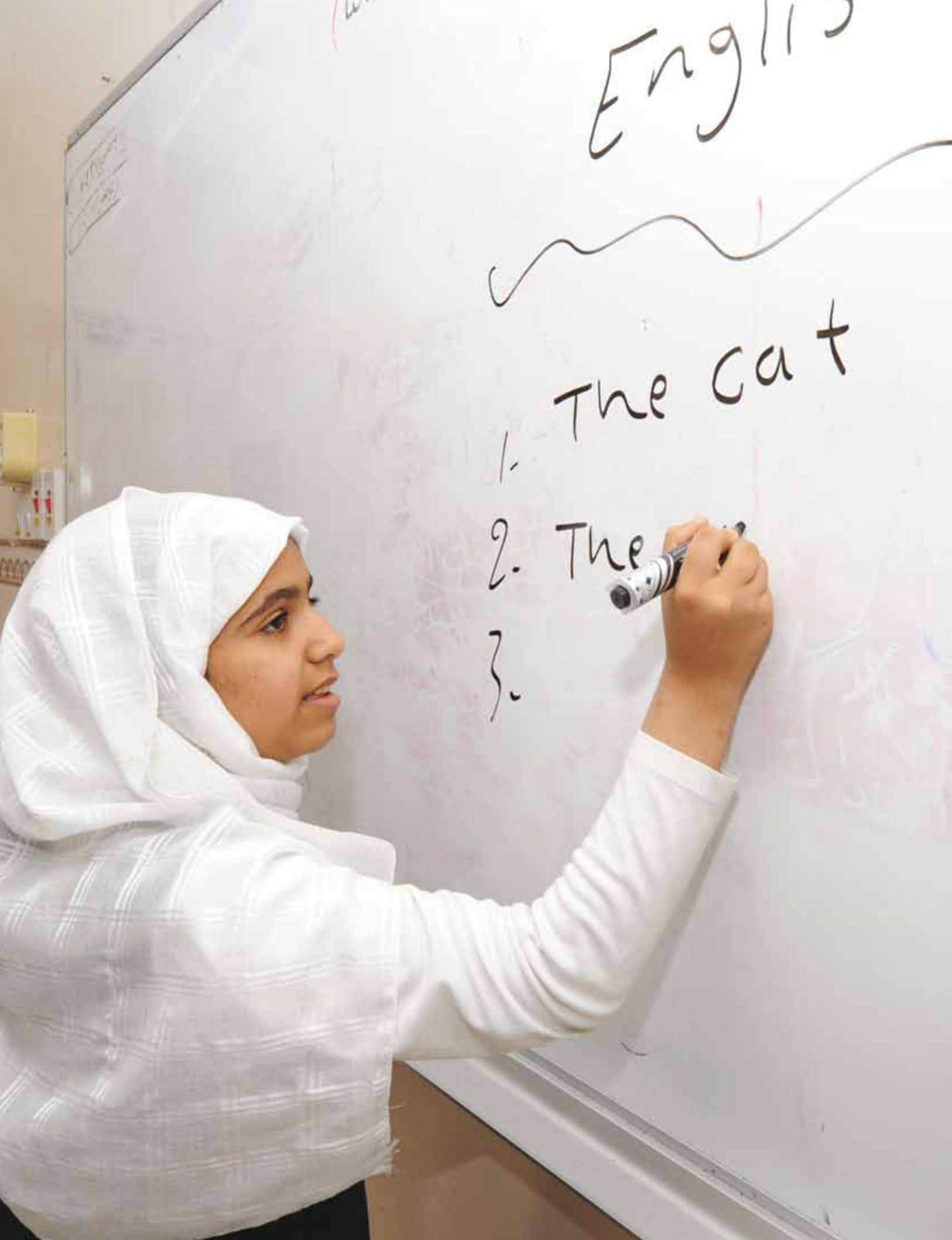
These initiatives include:

- the development of a 2040 Education Strategy, covering school, higher education and technical and vocational education and training (TVET).
- a proposal to restructure the school education cycles and upper secondary learning pathways.

It is important that the Ministry of Education initiatives are undertaken to contribute to the level of movement required to achieve an improvement across the system. Equally important is that these initiatives are coordinated and are consistent with the overall plan for change in both their purpose and their outcome. The recommendations of this evaluation will, therefore, include reference to the integration of these individual initiatives with the proposed framework for change set out here.

It is important that the Ministry of Education initiatives are undertaken to contribute to the level of movement required to achieve an improvement across the system.

1 Refer, for example, to the World Bank Report (2012) and the Canedcon Report (2004) on the education system in Oman.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4.5 A Framework for Managing Change

4.5.1 The case for change in education sector governance

As described above, the Oman education sector faces a number of governance challenges. While it has the features of a separate and independent organisational system (e.g. micro-level governance; a singular, defined functional focus (education); allocated dedicated financial resources; dedicated personnel) it operates within, and is administratively influenced by, the rules, regulations and practices of the broader civil service system (meso-governance). The ability of the Minister of Education to introduce significant efficiency measures or to change the structure and procedures of administration and resource management, therefore, is limited to changes consistent with the meso-governance.

Over the past 40 years Oman has concentrated its educational development efforts on bringing children into the system and replacing foreign teaching staff with Omani. The success of these efforts has been widely acknowledged. The emphasis now is on lifting the quality of the educational outcomes produced by the system.

One of the core challenges is that in the process of achieving the first two objectives of introducing education and building the internal capacity within the system, some obstacles to delivering a quality service have been introduced into the system.

The challenges that present themselves in the classrooms of Oman have a direct consequential impact on the performance of students. Education practice that is not of a high standard cannot produce young people with the requisite skills and knowledge to compete in the local and national (and international) job markets (Hanushek and Woessman, 2010). As a result, the poorly performing education sector cannot support the economic aspirations of the nation as set out by the Sultan. The current performance ratings of the Oman education sector provide a strong case for the need, and the urgency, to change.

The challenges that present themselves in the classrooms of Oman have a direct consequential impact on the performance of students.

4.5.2 Educational performance – international comparators

In comparison to other countries, Oman is not performing well in terms of educational outcomes (some relevant comparators have been provided in Appendix 6). The 2011[2] Trends in International Maths and Science (TIMSS) study assessment of mathematical performance for students at Grade 4 and Grade 8 is well below the centre point of 500, at 385 (G4) and 366 (G8) respectively. The TIMSS results place Oman significantly below all comparator countries, and second to last of all the countries included in the survey, with only Kuwait performing more poorly in maths and science.

Similarly, in the 2011 International Reading Literacy Study (PIRLS) Oman performed well below the average scale score of 500 with a rating of 391. Again, Oman was ranked second worst performer with only Saudi Arabia having a lower average rating. When assessing the difference between the performance of boys and girls, the international differential is 16 points. By comparison, Oman has a gender differential rating of 40 points in favour of girls. In the total international sample, only Saudi Arabia has a higher differential with 54 points.

It is important to note that in both the TIMSS and the PIRLS analysis reservations about the reliability of the achievement estimates were stated, as 15% of students had an achievement too low for estimation. These students achieved scores lower than the result that could have been achieved if the students had guessed the answers and been randomly correct. This is a serious caveat that makes the Oman performance results of even greater concern.

Although formal school-based education is relatively new in Oman, having only been introduced on a national basis from the 1970s, there are other countries particularly in the GCC and in parts of the Asian continent that have followed a similar path, albeit a few years ahead of Oman. Although Oman has the poorest overall performance in the international study of maths, science, reading and literacy, it shares its position below the centre point with all of the other GCC countries that are experiencing similar struggles.

There is the opportunity, therefore, to learn from the efforts of neighbours facing similar challenges.

There is the opportunity, therefore, to learn from the efforts of neighbours facing similar challenges. On the other hand, some of the nations that have taken the same path (e.g. Brunei, Singapore, Hong Kong and South Korea) and have been very successful (in some cases extraordinarily successful) can be used as exemplar benchmarks and their educational systems used to highlight good practices that may be possible to emulate. There is a caveat here, however: change needs to be done incrementally, and leaping directly to world best practice is not always possible.

In their 2010 study of 20 nations that had successfully "registered significant, sustained, and widespread student gains" in international assessment ratings, (Mourshed et al., 2010) cautioned that to achieve sustainable gains, countries need to work in ways that are culturally applicable to their own nations and to the stage of educational achievement that they are currently at. That is, they suggest that in the shorter term a country whose performance is 'poor' can learn more from countries that have improved their performance significantly and moved from a 'poor' rating to a 'fair' rating (e.g. Chile).

2 Note: PIRLS and TIMSS are published every four years. 2011 is the latest data available.

However, Mourshed et al. also identified six system-level interventions that are common to all 20 countries that have made significant gains in student performance, regardless of their stage of development. These interventions include:

1. Revising the curriculum and standards to improve the quality of education being offered.
2. Building the technical skills of teachers and principals.
3. Assessing students.
4. Putting in place an appropriate reward and remuneration structure for teachers and principals.
5. Establishing data systems that can be used to support the development of the system.
6. Putting in place appropriate educational policies and law to support the improvement and quality of the education system.

These findings seem to support some of the system responses that Oman is already making or planning. Research on nations that had succeeded in improving their educational performance consistently found that success was based on system-level interventions, customised to the governance arrangements for each country. While some nations have been very successful in creating dramatic and rapid improvements in their systems (e.g. Singapore), it is more common for change to be incremental.

Nevertheless, the research demonstrated that significant improvement in educational attainment is possible in as little as six years. For example, Chile was able to improve its Programme for International Student Assessment (PISA) score from 412 to 440 between 2000 and 2006. Where nations have made such significant gains, the research shows that critical success factors include strong leadership following a strong plan for development based on a small number of system-level initiatives that are implemented with discipline over time, and constant forward momentum.

The research demonstrated that significant improvement in educational attainment is possible in as little as six years.

The changes that will be proposed by the Consortium will be consistent with the findings from the international research.

4.5.3 Governance in the digital era

Like many other countries' public services, the Oman education sector is experiencing the challenges of merging modern technology (and the population's expectations of digital access) with received rules and administrative processes and practices.

Through increased exposure to modern technologies, individuals have come to expect rapid, responsive and in some cases instantaneous interaction and communication with the business sector and in many other aspects of their private lives (e.g. through internet businesses, online shopping, interactive TV and social media).

However, as participants in, and recipients of, public services, they must work with the bureaucratic administrative rules, regulations and processes of a pre-digital era. These services are characterised as slower, less responsive and inconsistent. Examples include the need to go in person to a ministry or multiple ministries to complete some transactions for a single service, and the requirement to present hard copies of original documents for verification.

This tension between digital age expectations and pre-digital age processing in the civil service is a recognised and much debated phenomenon in the international academic literature on e-government. Many countries invested heavily in providing information management systems that are designed to improve access to, and management of, critical official records (e.g. land records; court records; births, deaths and marriage records; licenses).

REFERENCE EXAMPLE (5)

South Africa, Canada, New Zealand and Australia, amongst other nations, have in recent years invested in digital management of their land ownership records. Other nations like India and Pakistan, for example, are in the process of finalising digital land record management systems.

Digitisation of land records, in general, includes a graphic sketch of a land parcel and a textual description of the land ownership and any associated rights (e.g. occupancy; crop inspection; valuation etc.).

Reports on these innovations have identified that digitisation has provided governments with cost efficiency and an ability to process land transactions quickly, accurately and consistently. This has resulted in improvements in the fairness and transparency of land ownership transfers and in the speed of transactions, while reducing the cost of administrative processing.

The Ministry of Housing in Oman has initiated the development of an ArcInfo-based Geospatial Information System for its base maps and land record management. Current records have not yet been converted to digital records.

There are digital information and record management opportunities within any education system that enable greater efficiency by improving administrative systems. The examples gathered of administrative request management (refer Reference Example (2) above) indicate that serious consideration should be given to using digital solutions to improve the efficiency and effectiveness of the education sector's administrative processes. The existing Ministry portal could be leveraged to achieve some of the required efficiencies (e.g. processing routine administrative matters like leave applications).

The existing Ministry portal could be leveraged to achieve some of the required efficiencies.

The electronic environment also has the ability to change teaching methods within a classroom; to support teaching with additional resources (e.g. through the use of video conferencing with subject experts in a different directorate); to deliver educational materials (e-content) and self-evaluation and learning tools (e-learning); and to utilise social media to create learning opportunities. The Ministry of Education has an e-learning directorate with the expertise and resources needed to design, develop and deliver e-solutions within the Oman education environment.

Like many other nations, Oman must overcome considerable challenges with respect to infrastructure, connectivity, accessibility, content and up-skilling the education sector in the use of technology and the understanding of how content can be provided to significantly enhance learning opportunities within (and outside) the classroom. Strategic partnerships with multinational technology companies are already in place for developing training in the use of equipment in Oman (e.g. Microsoft supports some of the current work of the e-Learning Directorate). Through these partnerships, opportunities for greater development of the electronic mode for educational purposes can be leveraged. Modern technology is an enabler of change to the content, style and delivery of the existing curriculum, which can be tailored to meet the needs of students more effectively.

4.6 Creating Change in Education Sector Governance

Based on the discussion in the section above, the Consortium is of the view that the education sector in Oman will benefit from changes that are:

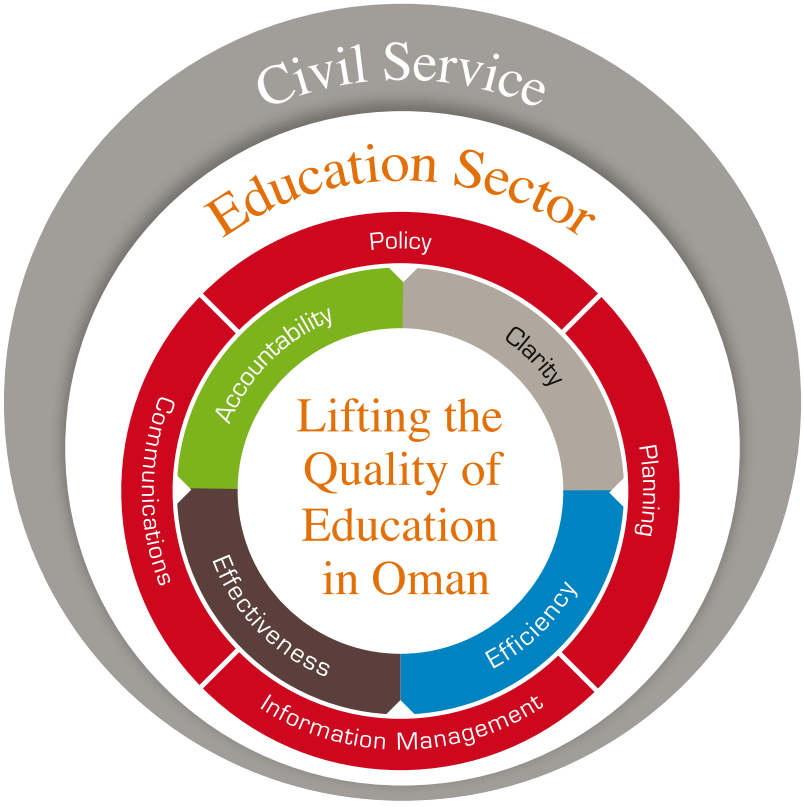
- Transformational in nature (i.e. represent a significant departure from current practice).
- Grounded in the principles of good governance.
- Focused on a small number of critical governance areas that can make a significant positive change to the performance of the educational system as a whole.
- Linked to changes in practice in educational delivery that can lift the performance of students.

Effective system change is not necessarily a matter of making big changes suddenly. It can equally be achieved by making significant changes in a planned and incremental way. As noted in the international study of nations successful in improving education (Mourshed et al., 2010), one of the critical factors is constant forward momentum, over time.

Effective system change is not necessarily a matter of making big changes suddenly. It can equally be achieved by making significant changes in a planned and incremental way.

The most important part of creating change effectively is to ensure that changes are purposeful (i.e. the intended outcome is clear), and that they are linked across all parts of the system (in this case, from the Ministry of Education to the Directorate offices and through to local schools) in a meaningful way.

Graph 4.1a **Lifting the Quality of the Education in Oman**



The purpose of changes to the Oman education system is to lift the quality of teaching and learning so that the skills and knowledge that young Omanis have when they leave school equip them to be good citizens who will make a strong contribution to the future economic prosperity of the Sultanate.

The rest of this chapter works through, and describes, the type of change required to support the goal of lift the quality of education. It sets out the principles of governance that should be adopted to support this change; and identifies the governance areas where change can be introduced to support the delivery of better classroom practices.

4.7 Transformational Change

In an education system as large and as complex as Oman's, effective change will have an impact that is experienced at all levels and that achieves the outcome being sought. This does not mean that it has to be implemented all at one time, but that any changes that are introduced work in combination to have a collective impact of enough significance to make a real difference, and to be able to sustain that difference over time. This level of change is described as 'transformational change'.

By definition, transformational change is radical in nature. That is, either the scale and/or the nature of the change is a significant deviation from that of the existing order. Transformational change is most useful when government is seeking a significant lift in performance, or where the time frame to reach the required outcomes is very short.

Transformational change is most useful when government is seeking a significant lift in performance, or where the time frame to reach the required outcomes is very short.

However, even when these conditions exist, it is also important to know the scale of the change required to achieve the desired outcome. That is, does a whole system need to change to have the greatest effect and the best chance to achieve the result being sought, or can parts of the system be altered to achieve the required result?

There are two major forms of transformational change[6] at the governance level:

1. **System transformation**

   Radical change in existing civil service systems and processes including changes to the fiscal management system; legislation; regulation; and decision-making rights over public resources.

2. **Sector transformation**

   Radical change in existing sector administration, information management and service delivery practices. This type of change may also have consequential impacts on structures and/or management practices.

To achieve a substantive lift in the quality of education in Oman, it must be recognised that the educational system sits inside the civil service system. That is, it can be regarded as a self-contained system within a larger, encompassing system (e.g. civil service regulations and financial laws).

While some aspects of broader systemic reform may be optimal to open up greater possibilities for innovation and to ensure that any changes to an internal system can be sustained over time, the scale of change required to achieve this is significant at both an organisational and at a societal level, and somewhat outside of the remit of the current assignment.

However, the desired lift in the quality of education can still be achieved by focusing on how the education sector as a self-contained system can be adjusted, using the instruments of governance to drive towards a single goal of improved educational outcomes for Oman students. While this level of change may be smaller in nature, it encompasses the whole of the education system and in that respect is very large.

4.7.1 Relevant principles of Governance

Many countries around the world have undertaken changes in educational governance and schooling practices over the past 20 years to improve the quality of teaching and the learning outcomes for students. The changes are often underpinned by a set of governing principles as the basis for how the adjustments to educational practices will be carried out. Not all of these principles are relevant to the Oman context and the way its civil service operates. Different countries' education sectors have different models of civil service that they work within; it is important that Oman adopts a set of principles that can drive reform effectively.

Some principles of governance appear to be universal across most international education models. They will assist Oman to build their own governance platform as a basis for directing changes within the education sector. The principles include:

- Accountability.
- Clarity.
- Efficiency.
- Effectiveness.

It is important that these principles are applied carefully to the Oman context and underpin the Oman efforts to raise the quality of education. A consideration of each of these principles and how they can be applied to support the education sector to achieve high-quality educational outcomes is set out below.

6 Definitions and discussion on transformation in this context is adapted from doctoral research carried out by Rose O'Neill (2009) E-Government: *Transformation of Public Governance in New Zealand*, Victoria University, Wellington, New Zealand.

Applying the principle of accountability in the Oman education sector

Definition: Each individual and group within the education sector acts with a commitment to raise the quality of education for Oman.

Outcome by applying this principle: *Unified focus on quality across the sector that has a pragmatic impact on resource management and innovation.*

Application: To achieve a significant rise in the quality of education in a system that is distributed across national, regional and local areas, it is important that people in all parts of the system have a common understanding of the priority of the quality agenda and how they can contribute to it.

The education sector contains complex sets of decision-making and service delivery responsibilities across a wide range of roles and functions. In general it can be assumed that people bring their best effort to their daily work and that they bring to bear their knowledge, skills and expertise on the role they perform. However, it should not be assumed that across a distributed system these collective efforts will necessarily achieve the lift in quality in education required, unless all members of the system knowingly apply their efforts to achieving such an outcome.

For example, a well-managed and well-operating information technology (IT) function may provide all of the software, hardware and network appliances that schools operating across the nation currently require, without fault. However, an explicit mandate to provide software, hardware and network options to the schools that will significantly increase the quality of education in Oman provides officials with a range of further options. IT managers, directors and technical experts may look to reprioritise the available budget and personnel resources to seek out applications, technology devices and networking options that provide teachers with a greater range of classroom techniques for classroom learning and students (and their parents) with more out-of-hours support for assisted learning available on mobile devices. The IT division might also work together proactively with the new Specialised Centre for Professional Training of Teachers to prioritise IT support for in-service training. Similar examples could be applied to other functions within the sector (e.g. policy, planning, curriculum, training).

An explicit mandate to provide software, hardware and network options to the schools that will significantly increase the quality of education in Oman provides officials with a range of further options

It is the understanding of how individual roles might support the systemic goal for higher quality education that will enable this sort of innovation to thrive.

Applying the principle of clarity in the Oman education sector

Definition: Every member of the education sector has a clear 'line-of-sight' between his or her work and that of others in the system. There is a clear, simple and direct line of connected actions that cascade through the different levels of the system, each making a contribution to lifting the level of student learning in Oman.

Outcome by applying this principle: *Central, regional and local 'ownership' of the intention to lift educational quality and an alignment of the collective effort.*

Application: In order to maximise the chances of greatest success in achieving a rise in the quality of education in Oman, it is important that people in all parts of the system are clear about their role in achieving the outcome. This clarity will derive from a clear understanding of how and why changes are being implemented, and the impact on educational outcomes that the changes are expected to have.

The density and complexity of the existing education sector in Oman make it difficult for people working in one part of the system (e.g. classrooms) to understand the role and contribution made by people in other parts of the system (e.g. policy or planning officials in the Ministry). In some instances, it may also

be difficult for them to understand the role and contribution their own work is making to the overall education system. That is, while teachers can easily see evidence of the educational impact their work has, a computer hardware technician in the Ministry may not so readily perceive the outcome of their contribution.

This situation is compounded by a culture of official secrecy that limits who is involved in making decisions, and how they are conveyed from the centre out to the regions and local schools. As a consequence, people affected by some policy decisions (e.g. changes to curriculum and/or exams) may not be aware fully of such decisions until they are tasked with implementation. Nor will they always understand why changes are being made. In these circumstances, some people may get confused and not implement the decisions correctly. As a result, the outcomes the decision-makers intended may not be achieved as anticipated.

A clear articulation of decisions and reasons for change is essential from the centre to the operational parts of the education sector.

A clear articulation of decisions and reasons for change is essential from the centre to the operational parts of the education sector. People also need to know what the nature of those changes will be and how individuals and groups within the system will be affected. Clear and transparent communication is required throughout the system to ensure that people are all contributing and are clear about the outcomes they wish to achieve.

In Singapore, one of the highest achieving educational systems in the world, the importance of this principle is so well recognised that there is a separate department solely responsible for ensuring that teachers and principals are well informed about new policies and processes before these are made public. Like Oman, the decision-making process in Singapore does not necessarily involve the teachers themselves, but it is regarded as a matter of professional respect and an important factor in successful implementation that teachers are specifically communicated with on matters of change. They also receive training on implementation where this will support the change requirements. The results of this approach are clear in the ownership and leadership that teachers and principals in Singapore display.

Applying the principle of efficiency in the Oman education sector

Definition: Systems and processes (including, for example, administration, finances and other resources) will be managed cost-effectively to support initiatives to improve the quality of the education in Oman.

Outcome by applying this principle: *Educational systems and processes focused on achieving improved quality outcomes for teachers and students.*

Application: Oman currently has a planning regime that appears to be well aligned with the 8th Five Year Strategic Plan and the philosophy of education in Oman. It is not, however, a plan that has at its forefront an explicit goal of achieving a measurable lift in the quality of education in Oman for the investment made. To have such a goal as a central reference point will require a reworking of the current five-year plan for education and a re-prioritisation of financial and other resource allocations to focus on the achievement of the goal.

Applying the principle of effectiveness in the Oman education sector

Definition: The education sector will achieve a significant increase in the quality of educational services (including, for example, the provision of curriculum, learning resources and material) that have a direct impact on increasing the levels of student achievement in Oman.

Outcome by applying this principle: *The structure and administrative organisation of the education sector at local, regional and central level is designed to support higher quality outcomes in student learning.*

Application: The education sector must be organised in such a way that policy decisions are easily communicated to the points of the system where they are to be implemented. In addition, the resources of the sector need to be arranged to most effectively deliver and support the lift in quality that is required. This means that the relationship between the Ministry of Education and the regional offices, and those between the regional offices and local schools, must be revisited to determine how the flow of information, resources and personnel between all points of the system works most effectively. The critical criterion of effectiveness is how the structural and administrative arrangements support the delivery of quality education in schools.

4.7.2 Critical governance levers of change

A sector as complex as education can potentially be manipulated in a number of ways to achieve desired outcomes. Such changes could include restructuring; redistributing financial and material resources; and/or re-organising the placement or duties of personnel. These can be changed individually or collectively depending on the scale of change required.

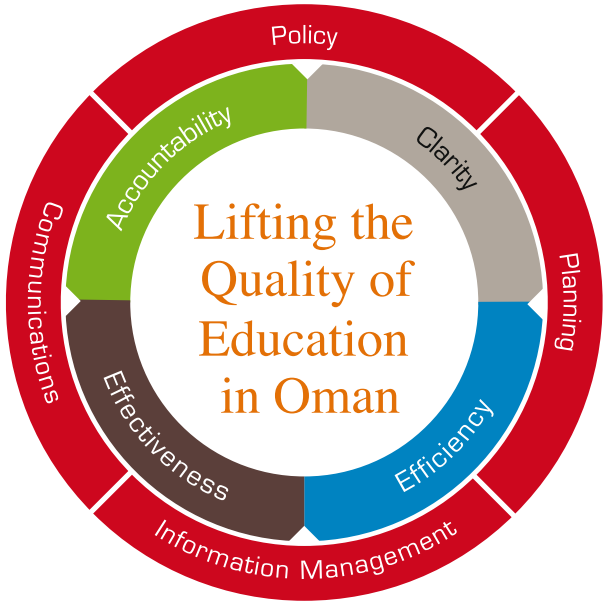
However, it is the view of the Consortium that to achieve a lift in the quality of education in Oman, the levers of change in the governance area should be confined to those few with the greatest ability to create efficiency and effectiveness. Selecting a small number of powerful levers enables the education sector to create significant change without impacting on the broader parent system of the Oman Civil Service. International research (Mourshed et al. (2010); refer section 5.5.2 above) supports the notion that in every case where countries have succeeded in achieving significant performance gains they have focused on "a small number of critical factors that go together to create a chemistry of widespread improvement".

It is acknowledged that there are a number of system responses currently underway in Oman that will have a broad system-wide impact on the education sector, that include the development of new educational law; the development of a number of independently operating bodies (Assessment Centre and Specialised Centre for Professional Training of Teachers); and a review of the structure of the Ministry of Education. The new education law will, in and of itself, be a powerful mechanism of change. The governance levers selected here are intended to complement the other sector changes, and we highly recommend that the architects of those changes review their designs to ensure that all significant changes are in alignment with, and contribute to, the overall goal to lift the quality of education in Oman.

The new education law will, in and of itself, be a powerful mechanism of change.

Set out below is the rationale and suggested changes in four areas of governance that the Consortium sees as being critical to shaping and focusing the education sector to achieve quality outcomes: policy, planning, information management and communication.

Graph 4.1b **Lifting the Quality of the Education in Oman**



Policy

Rationale: Setting the policy parameters for lifting the quality of education in Oman is the foundation for bringing a unified approach to underpin all of the endeavours across the educational system to achieve agreed outcomes. Policy is a critical lever of governance in that it sets the platform for decision-making about the way that education is delivered in Oman (e.g. curriculum, teaching, materials, property).

Unified, cohesive policy allows for the setting of resource allocation and management priorities across the educational system. It is important, therefore, that critical policy settings relating to curriculum, teacher training and professional development, schooling, assessment, educational equipment and materials, teaching resources, property and financial allocations are held centrally, not distributed across the system.

Ideally, educational policy would be co-ordinated from a central point within the Ministry of Education rather than being developed and presented for approval from separate sections and/or committees of the Ministry as currently occurs. Central organisation of core governance functions enables cohesiveness of purpose and ensures that key policy settings are aligned and work well together.

The Consortium notes that the current role of the Technical Office for Studies & Development includes functions that relate to the co-ordination of policy development and implementation, including:

- Receive and consider the required topics presented to the Policy and Planning Committee and the Board of Education.
- Study the educational development proposals prepared by the various directorates and departments of the Ministry and make recommendations thereon to the Policy and Planning Committee.
- Follow up and guide the implementation of educational policies technically and administratively.

Key informant interviews conducted during the Evaluation Project that policy development functions were distributed across a range of Directorates and committees.

Scope of required change:

2014 A dedicated policy function is established with responsibility for leading the policy design and development processes for the Omani education sector. This function replaces the distributed policy functions across the current Ministry structure.

2015 Policies have been developed and decreed to lift educational quality in accordance with agreed targets. This includes, but is not limited to, policies relating to:

- Educational achievement by boys.
- Contact hours for teaching.
- Improvements in literacy rates.
- Teacher training standards.
- Professional development for teachers.
- Curriculum developments including the contribution of e-learning opportunities.

Planning

Rationale: Formal planning is the mechanism for ensuring that policies and agreed priorities are appropriately implemented throughout the educational sector. Good planning processes provide the link between agreed policy priorities and practical implementation within given time frames (usually five-year periods).

Planning determines the resource distribution across the system including finance, personnel, equipment, materials and property. The current planning process, as described by key informants, involves consideration and discussion with a wide range of educational stakeholders during their development. It is less obvious that the results of these discussions collated into the final planning documents are then available to those who contributed to the planning process.

It is important that all plans that are approved by the Minister are widely distributed throughout the system (using the e-portal and as many other media as possible, including Ministerial presentations) so that all members of the education sector can see where and how their role contributes to the overall goal over the next five-year period. This information is critical to the stakeholder understanding of the level of importance attributed to the plan, and how it will be implemented at all levels of the organisation.

Scope of required change:

It is important that the next five-year strategic plan for the education sector reflects the agreed quality targets set out in this report; determines the priority for resource distribution in accordance with those priorities; and specifies how financial, material, equipment, property and personnel resources will be directed towards achieving them. The Consortium sees considerable value in ensuring that the development of the 9th Five Year Strategic Plan is done in accordance with the priorities that arise from this evaluation work, and are consistent with the framework proposed in this report.

It is the view of the Consortium that this can be achieved within the existing structure and processes. A change in emphasis of the planning process is required to ensure it is aligned with the policy settings for lifting quality across the system. It is also important that practice is supplemented by two additional components that are well resourced with appropriately skilled implementers:

1. Wide-ranging communication of all parts of the plan throughout the system at key points in time throughout the five-year period, including the provision of information on progress against the plan.
2. Training and involvement of key stakeholders (e.g. teachers) in key implementation processes.

A clearly directed communications plan is needed to ensure that the strategic plan is distributed across all parts of the education sector, and that it is widely explained. It is important that communication occurs not only when the plan is completed, but at regular times throughout the time period that it covers. Repeated communication reinforces the key messages and brings greater clarity and therefore, greater support for the plan.

It is equally important that the implementation of any plan developed at the centre (even with representative input during its development) is well organised and able to reach to all levels of the system for greatest effectiveness. Teachers reported that they are at times asked to implement policies and processes developed at the centre but they have little understanding of them. For implementation to be successful it is important that those stakeholders with a key role are thoroughly trained both in the required practice and about the broader picture and how this practice will contribute to the required lift in quality of education.

Information management

Rationale: Oman has a 'data rich' education system. Information is gathered from a wide range of sources, and covers many aspects of the education system. Data management and system performance monitoring is critical for its use as an input to future planning and evidence-based policymaking. The key is to translate available data into information that can be used to ensure the efficient and effective management of the sector.

In the digital age it is important that official records, insofar as is possible, are made available electronically in formats that will enable people throughout the system to use them for effective decision-making. Paper-based record systems are cumbersome, difficult to access and difficult to interrogate to yield richer information about any given subject.

In the digital age it is important that official records, insofar as is possible, are made available electronically in formats that will enable people throughout the system to use them for effective decision-making.

In addition, paper-based systems make information sharing difficult across and between different parts of the organisation. This encourages duplication of information and risks a lower level of reliability of the official record as different groups may collect the data and store it in different forms and formats. The ability of the efficient system monitoring is compromised in this circumstance.

Even where data is collected and stored electronically, it is less useful if it is not widely available in a consistent form and format to all interested stakeholders (e.g. teachers, directorate staff, researchers and policy analysts). While there is much data available about the education sector, the experience of the Consortium in carrying out this assignment brings us to the view that there is much to be gained from making the data available in aggregated forms that can be easily accessed by anyone in the system that needs it for research or analytical purposes. If the data was made easily available to managers, committee members and other decision-makers it could be a valuable asset for ensuring that decisions are well grounded in reliable information.

Scope of change required:

2014 Key data sets that provide information on the performance of the sector (e.g. daily attendance records) is available to key decision-makers in the Ministry of Education.

2016 All education system data (including aggregated financial, attendance, personnel and student learning data) is available electronically, and is available on the e-portal to all members of the education sector.

It is the view of the Consortium that much of the performance data is already available in the Oman education sector, and that the electronic applications that can translate the data into meaningful information are already readily available on the market and are not expensive to introduce. Many other countries already use these information repository technologies and could be sources of expertise and advice on strengths and weaknesses of implementation. Furthermore, on the basis of the feedback of key personnel from the education sector technology directorate, we take the view that the technical design and development skills and expertise already exist in the Ministry of Education, or could be readily obtained from the market.

Communication

The final key governance lever, and arguably the most important, is that of communication. Vertical and horizontal communication within a system is essential to the success of any significant change process. The decision-makers must effectively communicate decisions to all parts of the system to ensure that implementation is effective. People respond and cooperate most effectively when they know about and understand the change that is required, and how they can assist. Poor communication, on the other hand, results in frustration and a lack of support for key initiatives.

The people who are directly associated and working with and in schools on a daily basis are the ones who are best placed to observe education in practice and to provide feedback on the challenges they face and the successes in learning.

The second part of the communication lever is to build up effective and transparent feedback loops. That is, it should be possible for people working in the education sector to provide officials, analysts, managers and decision-makers valuable information on the concerns or needs of the schools, students, parents or directorates.

The people who are directly associated and working with and in schools on a daily basis are the ones who are best placed to observe education in practice and to provide feedback on the challenges they face and the successes in learning. Such information ensures that those at the centre of the organisation are developing policies and plans that are based on practical knowledge of what works in classrooms. These are essential building blocks for achieving a systemic lift in the quality of education.

Scope of change required:

2014 Comprehensive communication and stakeholder engagement plans are developed, that seek to engage all parts of the education sector in a collective endeavour to raise system performance.

2014 Agreed quality indicators of success are available to, and used in, every school to direct learning.

2015 The online feedback forum currently on the e-portal is marketed widely across the education sector and people are encouraged to contribute ideas to improving quality within the schooling system.

For an online feedback loop to be successful, it may be necessary to provide resources to assist people to use the website until they become familiar with it and comfortable in using it.

Rapid responses to feedback from stakeholders need to be developed in a positive and constructive manner to build trust and confidence in using the tool. It may also be necessary for the Ministry to take some of the ideas and build exemplary responses to them so that people can see that providing feedback is effective and that they are being listened to.

4.8 Measuring Success

4.8.1 Setting targets

It is important that Oman has a means of assessing the impact of the changes they make, in order to know whether the introduced changes yield the intended outcomes. The Consortium is of the view that the best way to assess progress is to set a small number of meaningful targets for educational performance and use these as a consistent measure over time. This way progress can be tracked, and the effectiveness of changes can be assessed and modified if necessary.

Oman has been participating in international assessments of educational performance (PIRLS and TIMSS) since 2007. This participation provides a baseline measure of the current performance of the educational system. It also highlights specific areas where improvements are required to enable Oman to have an education system that produces outcomes on par with other nations. It is logical, therefore, to use existing performance standards as a basis for gauging improvement.

In addition to specific learning outcomes in reading, writing, maths and science, international research clearly links literacy levels with likelihood of employment, and levels of employment with economic growth and development.[3] Therefore, literacy rates are an important indicator of educational success.

The other area of focus should be the performance of boys in the education system. In accordance with the societal norms of Oman, boys are an integral and critical part of future economic performance. Oman is a relatively young nation with a medium age of only 24.4 years. Boys need to be able to leave school with the skills and knowledge required in the workplace, as the social expectation is that they will take their place in contributing to the economic welfare of their immediate and extended family, and community. It is important, therefore, that boys are well educated and have the skills and expertise to contribute effectively to the future economic growth of the nation.

The Consortium strongly recommends that Oman identifies specific performance targets as a gauge of success for the education sector. For example, by setting targets such as:

1. Increase in educational performance as measured by international assessment indicators Specifically, that Oman aim to achieve a:
   - Minimum 5-10% increase in Oman educational performance by international assessment indicators – PIRLS/TIMSS in reading, writing, math, and science every assessment cycle.
2. Increase in literacy rates for G 1–12 measured by:
   - Oman ranking in the Top #130 in PIRLS ratings by 2021.
   - Oman ranking in the Top #110 in PIRLS ratings by 2026.
3. Increase in educational performance by boys measured by:
   - Increase in academic performance by boys in TIMSS/PISA by 2021.
   - Oman meeting the international average for differential between the genders (16 points) by 2021, and improves on this differential by 2026.

3 See for example: Reedy, L. (2010) *Adult Literacy Development and Economic Growth*, National Institution of Literacy; McCracken, M. and Murray, S. (2009). *The Economic Benefits of Literacy: Evidence and Implications for Public Policy*, Canadian Language and Literacy Research Network; or Judge, K. (2004). *Adult Literacy and Economic Growth*, NewZealand Treasury.

4.8.2 Success indicators

As the recommended system targets are all long-term indicators of progress, it is important that education officials are able to track progress over a much shorter timeframe to ensure they are making the gains they expect. International literature indicates a number of best practices in educational delivery that can have a significant impact on raising the performance of students. Using a small number of key indicators as a mechanism for monitoring progress and focusing initiatives will provide the impetus required for the system to drive the required changes in educational practice.

The Consortium recommends that Oman use the following three indicators to signal that the proposed system changes are having the positive effect on lifting the quality of education that is required:

1. Improvements in student/teacher contact time

There is strong evidence in the literature that high student achievement is directly linked to positive relationships with teachers,[4] and a greater amount of time spent in classroom instruction and learning. There are also other factors such as families supporting their children's learning at home, that have been shown to have a positive impact on student learning, but these can be much more difficult to monitor.

The Consortium recommends that the indicators be established in areas that measure increased and improved contact hours between teachers and students across the system:

- Increased compliance with stipulated learning days.
- Increase in student engagement in formal learning time (based on student engagement surveys).
- Decrease in student absenteeism.

2. Teacher quality

Defining quality teaching is not easy and can vary from culture to culture. However, the international research focuses on a common set of indicators such as subject content mastery; command of a broad set of pedagogical skills; high communication and interpersonal skills; life-long commitment to learning, especially in areas of specialisation; and teachers who are reflective of their teaching practices.[5] Some research highlights evidence that teachers who receive substantive professional development (an average of 49 hours per year) can boost student achievement significantly.[6]

As mentioned above, Oman is investing heavily in the professional development of teachers through the implementation of the Specialised Centre for Professional Training of Teachers that will provide in-house training to existing teachers. It is important, therefore, that Oman continuously monitors the impact of investment on the quality of teaching, and the consequential impact on the levels of student achievement. In particular, the following indicators should be put in place and monitored:

- An increasing percentage of all teachers in Oman with an undergraduate degree qualification and a recognised teacher training qualification.

4 See, for example, Hightower, A. M. et al. (2011). *Improving Student Learning by Supporting Quality Teaching: Key Issues, Effective Strategies*, Editorial Projects in Education; Rickin, Hanushek & Kain (2005) 'Teachers, Schools and Academic Achievement' in *Econometrics*, 73, 417-458; McCaffrey et al. (2003.) *Evaluating Value Added Models for Teacher Accountability*, Santa Monica, CA RAND Corp.

5 Refer: Hightower et al. (2011) *Ibid.*

6 Yoon, K. S. et al (2007) *Reviewing the Evidence on How Teacher Professional Development Affects Student Achievement*, Institute of Educational Sciences, US Department of Education.

- Teacher training qualifications are acceptable to, or approved by, overseas training institutions such as Singapore's National Institute of Education and/or the National College for School Leadership in the United Kingdom, or equivalent.
- An increasing percentage of Oman teachers who have undertaken a Professional Development Learning and/or in-service training opportunity within the last 12 months of teaching.

3. Improvements in educational resources

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) identifies teaching and learning materials and aids as one of the key determinants of quality of education.[7] UNESCO asserts that:

> **It is essential for quality materials to be made available to the teachers and students in adequate quantities to support the teaching and learning process (Module 4, 2013).**

Teaching and learning materials and aids include, but are not limited to, textbooks, maps, models, charts, kits, books, newspapers, magazines, reading materials, science equipment, sports equipment, music instruments and resources and arts aids. Where audio-visual aids are in use in the schools it can also include audiotapes, videotapes, CD Roms, USBs, DVDs and internet access.

Investment in educational resources needs to be prioritised and appropriately funded to support the approved curriculum and literacy gains Oman is striving for. The Consortium recommends that Oman develops a register of critical resource materials at every level of schooling, and monitors the resources that schools have, ensuring that the register is updated on a bi-annual basis so that educational materials are regularly modernised, kept in good repair and are made available to students and teachers in the classroom.

7 UNESCO (2013). 'Module 4: Use of Information in Monitoring, Planning and Monitoring' in *Systematic Monitoring of Education for All*, PowerWord.

Conclusion

The education system is a component of the wider government and public service system that operates within the Sultanate of Oman. Taking into account the wider context within which the Ministry of Education is operating, the Consortium recommends that strategic linkages across Ministry of Education initiatives and oversight of the performance of the system can be strengthened by building upon the existing governance and administrative functions and processes within the education system and incorporating principles of accountability, clarity, effectiveness and efficiency.

Four key areas of the Ministry of Education, that is policy, planning, information management and communications, have been identified for careful attention by Ministry of Education officials and members of governance teams to improve the effectiveness and efficiency of administration processes. Strengthening governance mechanisms, and implementing a coherent, focused and integrated administration of education initiatives can have a powerful impact on the way the education system behaves and operates, ultimately leading to a significant improvement in educational outcomes.


مسارك المهني
للصف العاشر

CHAPTER 5

FINANCE

The Terms of Reference for the Ministry of Education Evaluation of the Education System (Grades 1-12) set out the following components for the evaluation of the Finance aspect:

1. Appropriateness of the share of the government budget allocated to the Ministry of Education.
2. Appropriateness of costs per student allocated in Basic Education Cycle One, Basic Education Cycle Two and Post-Basic Education.
3. Effectiveness and efficiency of the way the Ministry allocates its budget.
4. Appropriateness of decentralising budget decisions to governorates and schools.

Summary

Oman's spending on education, compared as a percentage of total public spending, is close to the average of OECD (Organisation for Economic Co-operation and Development) countries. As well Oman sits at the top of the bottom quartile of a number of countries that are similar to Oman. Similarly, Oman's education spending, as a percentage of GDP, is close to the OECD average and sits in the middle of a range of countries with similar GDP per capita as Oman.

From all the financial indicators the Consortium looked at, Oman did not present itself as very different to comparable countries.

Another way to assess appropriateness of educational expenditure is to review the evidence from the economics and education literatures on what matters for educational achievement. In education, like other fields, the law of diminishing returns applies. This means that after a certain level of expenditure, continuing to increase spending will not guarantee better student performance. When expenditure per student was mapped against educational achievement, Oman was similar to Saudi Arabia and Qatar, but well below that of other comparators.

Oman has reached the critical position of needing to consider how resources are spent (rather than how much is spent) to lift student achievement levels.

Economic and education theory shows that within schools, teachers have the greatest influence on student learning. The focus for education policy on expenditure needs to be on identifying the direct and indirect financial factors that will most improve the quality of teaching.

The Oman Government has a very centralised system of financial control. The focus of the financial management system is on the control of inputs and this has consequently been the focus of the Ministry of Educations financial management system. This input based focus has led to substantial information gaps at the aggregate system level. These gaps are created by:

- Limited use of coding (limited coding by governorate, school site or directorate).
- Limited management reporting capability due to lack of integration of multiple financial management information systems.
- A lack of a comprehensive annual internal budgeting system within the Ministry.[1]

The Ministry of Education is aware of these constraints and is in the process of planning for the implementation of a new Financial Management Information System. There is a significant opportunity in this development to identify the management accounting needs of the education system leaders for effective decision-making and to incorporate these into the new Financial Management Information System. This will require greater integration of management information systems and developing an output based internal financial management accounting system while retaining the input based functionality required for reporting to the Ministry of Finance.

1 The Ministry is using the Oracle Database management system and is connected with the Ministry of Finance.

Greater focus on the budget allocation to outputs would improve the efficiency and effectiveness of the schooling sector. Since 2006:

- Around 90% of the budget was spent on remuneration.
- There has been a low allocation to non-salary inputs linked to teaching and learning.
- There has been a rapid growth in the number of administrators relative to teachers, students and classes.
- There is a wide dispersion in administrator to student ratios, teacher to students ratios and students per class ratios across governorates.
- The reduction in teacher to student ratios has not reduced the high student to class ratios.

The Ministry of Education in Oman is more centralised than many countries as all major decisions – on administration, on budgeting, on staffing and on teaching programmes– are all made at the centre. The 8th Five Year Strategic Plan (2011-2015) emphasises the need to decentralise administrative and financial tasks and pilots are underway to devolve responsibility in five regions for a range of non-salary operational items. Over time there is scope to continue to decentralise more staffing, administrative and budget decision-making ultimately to the schools. This will enable the centre to focus more on what needs to be managed centrally, such as teacher quality, programmes and curriculum. This will also enable the regions to act as a mediating layer between the centre and the individual schools.

Approach

A desktop analysis was undertaken based on a literature scan and an analysis of the available data supplied by the Ministry of Education.

Relevant literatures were scanned to pull out 'stylised facts' about the performance of schooling systems. Stylised facts refer to general conclusions that are true in general on average across a range of countries and time periods (but need not be true in each and every case). In the case of education, these stylised facts include:

- The quality of teaching is more important than the level of spending per student, class sizes etc. (OECD 2012).
- The quality of how resources are spent (rather than how much is spent) is critical for learning outcomes (OECD 2012).
- Out of school factors (student ability and attitudes) are the largest source of variation in student learning (Treasury 2012).
- Within schools, teachers have the greatest influence on student learning (Chetty-Friedman and Rockoff 2012).
- School governance also matters i.e. site based school management (Rivkin Hanushek and Kain 2005).

Using these stylised facts the implications are explored by reviewing previous analysis of education in Oman and trends in the most recent education spending and achievement data. The lack of consistent data to compare countries has limited the scope of that analysis.

5.1 Appropriateness of Education Spending Share

5.1.1 Education expenditure as a share of total government budget

To measure the appropriateness of government spending on education in Oman the Consortium first compared Oman to a range of different countries and aggregations such the OECD, European Union and the Arab World.[2] The main year for comparison is 2010 because it was the most recent year where statistics are available for most comparator countries. Data was only available for total education spending on early childhood, schooling and tertiary education combined. The Ministry of Education spend was 71% of the total education expenditure in 2010/11 which suggested that around two thirds of education spending in Oman is related to schooling.

Education in Oman accounted for 11.7% of total public expenditure during 2009 and 2011[3]. Education expenditure in Oman increased by 32% between 2009 and 2011, which is a substantial increase in Oman's investment in education. Substantial increases in education spending are expected in 2014 when civil service salaries are increased to bring them in line with the wider civil service.

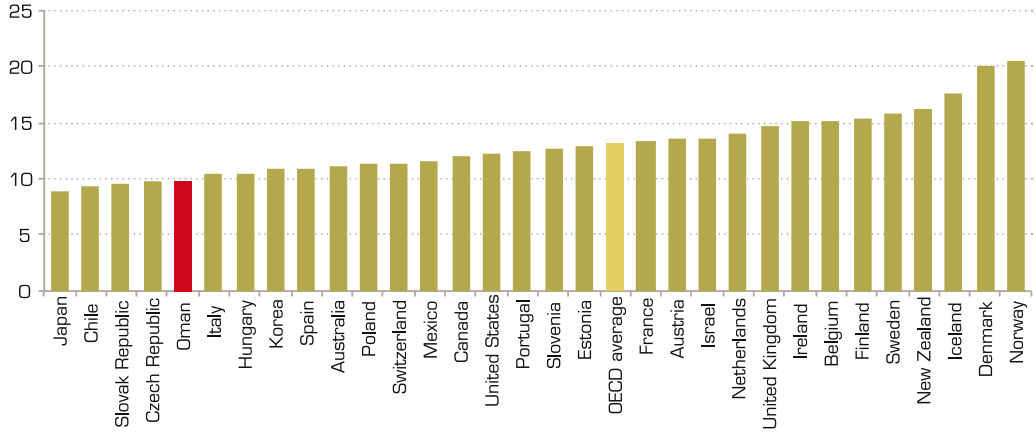
Graph 5.1 shows that Oman's public spending on education (13.5%) is around the OECD average. Oman is at the top of the lower quartile of developing countries. Other sources show that Oman ranks third amongst Co-operation Council for the Arab States (for which data was available) on education expenditure to GDP and education expenditure to total public spending.

2 The Arab World includes Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, Palestine, Yemen. The statistics for the aggregation is compiled by the World Bank.

3 Both total public expenditure and education spending increased significantly over this period. In 2010, the education share jumped to 18.8%. 2010 appears to be an outlier due to the increase in total public expenditure lagging behind the increases in education expenditure in 2010 and then total spending catching up in 2012.

Graph 5.1 **Education expenditure as a % of public expenditure**

The share of total public expenditure spent on education at all levels in for the most recent year available between 2007 and 2012

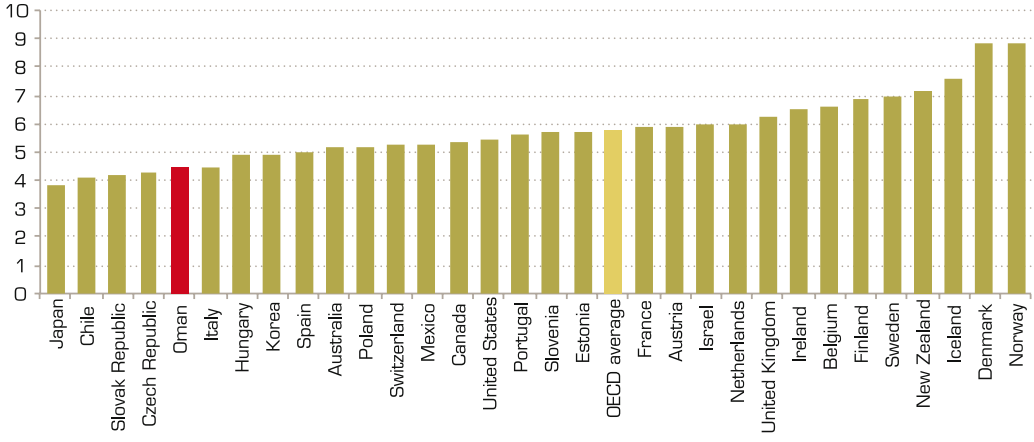


Source: NZIER, World Bank Data Bank

5.1.2 Education expenditure as a share of GDP

While the previous section looked at total education spending as a percentage of public spending, this section looks at education spending relative to GDP. Graph 2 shows that spending on education as a share of GDP by OECD members in 2010 varied from 3.8% in Japan to 8.8% in Norway. The OECD average is 5.8% of GDP. By comparison, Oman spent 4.2%, which is similar to the level of Chile (4.1%), Slovak Republic (4.2%), Czech Republic (4.2%), and Italy (4.5%).

Graph 5.2 **Oman and other education expenditure (as % of GDP)**



Source: NZIER

Graph 5.2 used data from OECD countries (education expenditure % of GDP) as comparable data are not consistently available for Arab countries. Table 5.1 compares GDP per capita in Oman with a range of other Arab and other countries.

Omani education expenditure (as ratio of GDP) is in the middle of the range for the countries shown in Table 5.2. Compared with countries of similar per capita GDP, Omani education expenditure (which averaged 4.2% of GDP) exceeds that of Bahrain, but is below that of Saudi Arabia and Korea and the OECD average (5.3%).

Overall, there is no single best measure that shows the appropriate level of education spending. Spending on education as a % of total public spending is around the average for OECD countries and at the top of the bottom quartile for a range of comparable countries. Similarly, education spending as a percentage of GDP is similar to the OECD average and in the middle of the range of countries with similar GDP per capita. Oman ranks third amongst Co-operation Council for the Arab States (for which data was available) on education expenditure to GDP and education expenditure to total public spending. Oman was not an outlier in any indicator reviewed by the Consortium.

Table 5.1 Comparison of GDP per capita (US$)

Country	2009	2010	2011	Growth 2009-2011
Yemen	1,106	1,401	1,361	23.1%
Egypt	2,462	2,804	2,972	20.8%
Tunisia	4,177	4,207	4,350	4.1%
Iran	4,931	5,675	6,816	38.2%
Chile	10,107	12,671	14,501	43.5%
Korea	16,959	20,540	22,388	32.0%
Bahrain	16,213	20,546	22,467	38.6%
Oman	17,597	20,984	23,133	31.5%
Saudi Arabia	16,013	19,327	24,116	50.6%
United Arab Emirates	35,025	34,049	39,058	11.5%
Kuwait	37,161	40,091	51,497	38.6%
Qatar	62,390	71,510	89,736	43.8%

Source: World Bank Development Indicators

Table 5.2 Education expenditure as a share of GDP (%)

N/A= not available

Country	2007	2008	2009	2010	2011
Bahrain	3.0	2.9	N/A	N/A	N/A
Chile	3.2	3.8	4.2	4.2	4.1
Egypt	3.7	3.8	N/A	N/A	N/A
Iran	5.5	4.8	4.7	4.7	N/A
Korea	4.2	4.8	5.0	N/A	N/A
OECD members	5.0	5.2	5.6	5.6	N/A
Oman	4.6	3.7	4.5	4.0	4.0
Qatar	N/A	2.5	N/A	N/A	N/A
Saudi Arabia	6.4	5.6	N/A	N/A	N/A
Tunisia	6.5	6.3	6.5	6.2	N/A
Yemen	N/A	5.2	N/A	N/A	N/A

Source: NZIER analysis of Omani national accounts and World Bank Data Bank for all others

5.1.3 Expenditure per student and student performance

In this section, the Consortium compares expenditure per student and student performance in Oman to a range of other countries.[4]

The Consortium has used expenditure per student as a percentage of GDP per capita, measured in US dollars and adjusted for purchasing power (a measure used by the OECD). This allows for differences in the size and level of development of the economies across the countries compared.

GDP per capita is used to compare the average income of individuals in different countries. By comparing education expenditure per student as a share of GDP per capita the Consortium benchmarked for differences in population and economic performance to measure and compare the average investment per student to average national income per capita.

The Consortium obtained student performance results from the World Bank's databank on education. Mathematics and science achievement levels are benchmarked internationally according to the International Association for the Evaluation of Educational Achievement Trends in International Mathematics and Science Study (TIMSS http://www.iea.nl/data.html). Up-to-date TIMSS data is available for almost all OECD countries but only for a small group of Arab countries.[5]

4 For Oman the Consortium has used official estimates of cost per student from the annual education statistics. The Consortium is aware that the estimates of the cost per student can vary depending upon what assumptions are made about factors such as student teacher ratios which vary over time.

5 Internationally comparable data is also available from the 2011 International Reading Literacy Study (PIRLS). Oman's relative level of reading achievement was similar to science and maths. These achievement results are analysed further in the chapter on student learning.

Oman's expenditure per student for lower secondary as a proportion of per capita GDP (16.7%)[6] is similar to the proportion invested by Saudi Arabia (19.3%)[7] and Sweden (19.8%). Oman's expenditure is one of the lowest amongst the countries compared, but it is higher than Norway (14.6%).

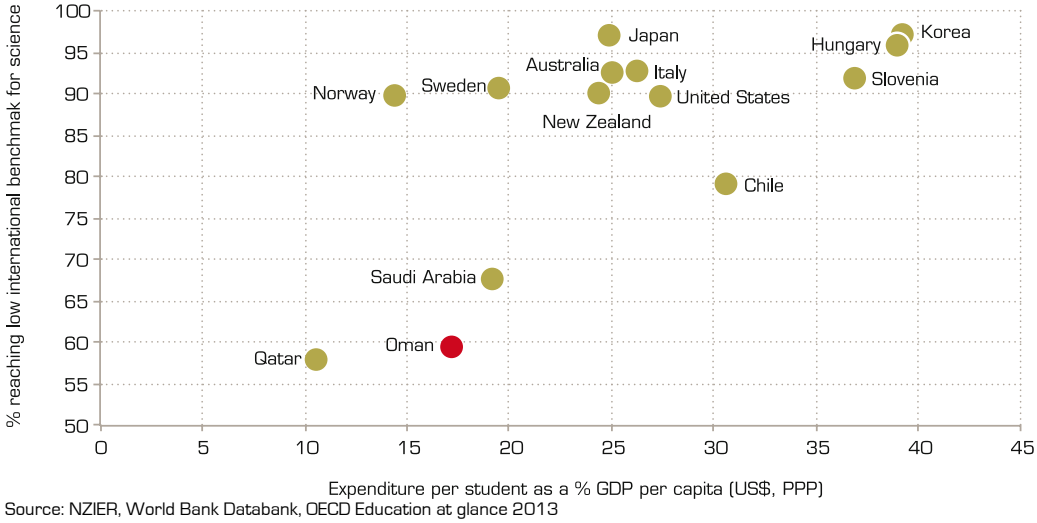
While the levels of expenditure is similar for Oman, Saudi Arabia, Norway and Sweden, Graph 5.3 – 5.4 show that educational achievement varies significantly between these countries.[8]

Eighth grade achievement in science and mathematics

This section reviews achievement by students in Oman relative to spending. The Consortium compared the percentage of students in Oman reaching the low, intermediate, high and advanced international benchmarks[9] to the percentages other countries for which data is available.

In science, Graph 5.3 shows Omani student achievement is 59.4% for the low international benchmark. Qatar has a slightly lower level of achievement at 57.9% for a much lower spend. Saudi Arabia performs better than Oman with 67.6% of students achieving the low benchmark for a slightly higher spend. Norway and Sweden had achievement levels of 89.7% and 90.5% for similar proportion of spending to GDP as Oman.

Graph 5.3 Eighth grade students achieving the low international benchmark for science



Source: NZIER, World Bank Databank, OECD Education at glance 2013

6 Based on GDP per capita official estimates of cost per student translated into US$.

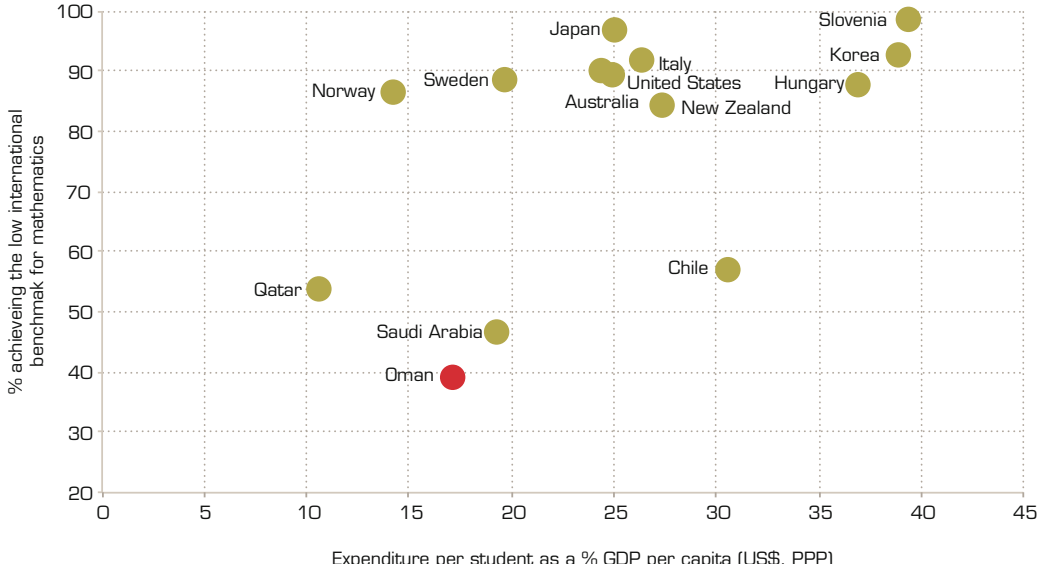
7 Sourced from the United Nations Institute of Statistics. The most recent estimate is for 2007.

8 There is a longer discussion of achievement in the chapter on student learning. In particular, this shows that that in Oman the gap between girls and boys is amongst the largest recorded gap of any country in TIMSS.

9 The international benchmarks on 8th grade mathematics and science for low, intermediate, high and advanced are scores above 400, 475, 550, and 625. Based on statistics from the International Association for the Evaluation of Educational Achievement (IEA)'s Trends in International Mathematics and Science Study (TIMSS).

In mathematics Oman has the lowest percentage of students achieving the low international benchmark (Graph 5.4) while the spending proportion is comparable to a number of countries. Only 39.8% of eighth grade students achieved the international benchmark compared to 46% in Saudi Arabia and 53.7% in Qatar. With the exception of Gulf State countries and Chile, all other countries have student achievement rates at or over 80% for the mathematics and science low international benchmarks.

Graph 5.4 Eighth grade students achieving the low international benchmark for mathematics



Source: NZIER, World Bank Databank, OECD Education at glance 2013

5.1.4 Spending and student achievement

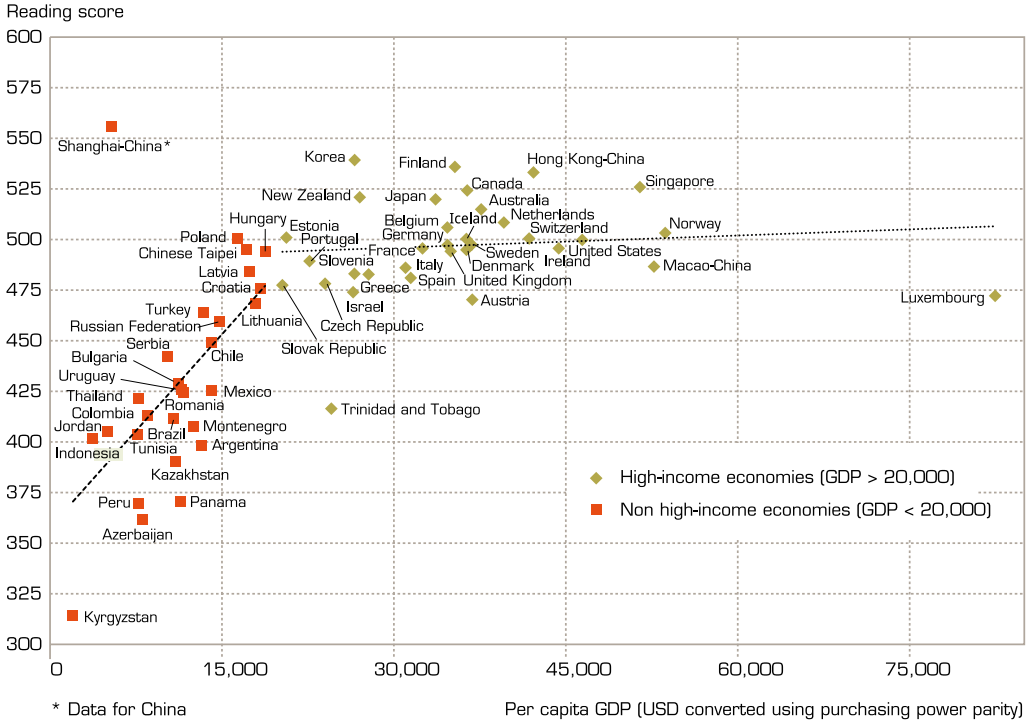
The Consortium undertook a scan of the relevant literature to identify some 'stylised facts' on the performance of schooling systems. Most importantly for Oman (which has GDP per capita of $US20,984), there is only a significant positive relationship between national resources and student results up to per capita GDP threshold of $US20,000 (OECD 2012). Thereafter it is the quality of how resources are spent (rather than how much is spent) that is critical for learning outcomes. In particular, the quality of teaching is more important than the level of spending per student and class sizes (OECD 2012).

Graph 5.5 compares per capita GDP with student achievement in reading for a range of countries using PISA data. PISA refers to the OECD's Programme for International Student Assessment, which looks at the achievement of 15 year olds in reading, mathematics and science. The Consortium understands Oman has not participated in PISA.

What is striking about Graph 5.5 is that amongst high income economies there is a wide range of student achievement for a given level of per capita GDP. Figure 6 compares the relationship between spending and student achievement in both developing and developed countries. The OECD concludes that what matters more for achieving better performance among OECD countries "is how the resources are spent rather than how much is spent" (2012 p.2).

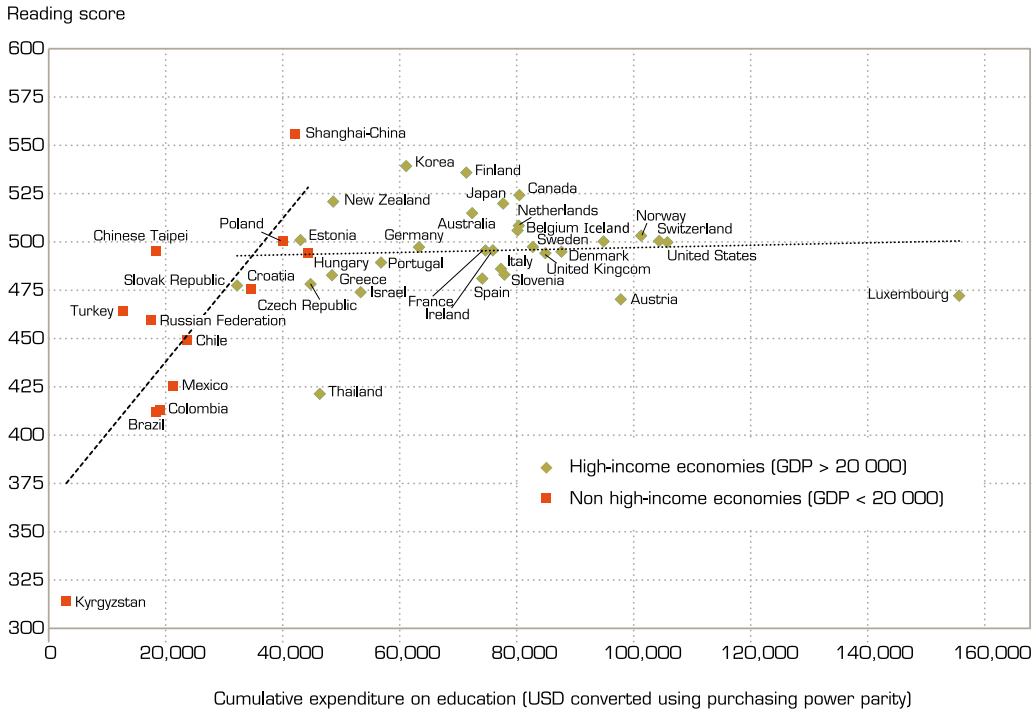
Increasing expenditure per student will not necessarily deliver better results. More inputs are not enough to make schools work better. Indeed, as the Consortium has noted in Graph 5.3 and 5.4 above, some countries with similar levels of economic development and expenditure per student have been able to achieve substantially better results than Oman.

Graph 5.5 GDP and student achievement



Source: OECD PISA in Focus 13 (February 2012)

Graph 5.6 Spending and student achievement



Source: OECD PISA in Focus 13 (February 2012)

Over the last decade, while differences between developed and developing countries has narrowed for enrolment rates and years of schooling, the gaps in student achievement remains large. Attaining higher levels of student achievement depends upon the quality of spending on curriculum development and improving teaching and resources. Where expenditure does matter is in attracting and retaining high quality teachers. Countries with higher PISA results tend to encourage high quality teaching through higher teaching salaries and higher social status for teachers.

US based research indicates that teachers and the quality of their teaching, measured by improvements in students' results, contributed directly to student earnings in adulthood (Chetty, Friedman, and Rockoff 2012). Teacher experience in early education has also been linked to better results, higher adult incomes and improved living standards (Chetty, Friedman, Hilger, Saez, Whitmore Schanzenbach, Yagan 2011).

OECD experience suggests areas for focus in Oman include improving the quality of teaching, the utilisation of learning resources and ensuring that the expected level of teaching is delivered consistently throughout the school year and across the regions.

Achieving this focus will require more systematic data collection so that information on outputs and outcomes can be used to inform decision making. Section 5.3 will review the effectiveness and efficiency of the way the Ministry allocates its financial budget.

5.2 Appropriateness of Per Student Costs by Level

5.2.1 Expenditure per student

To consider the appropriateness of expenditure per student the Consortium benchmarked Oman against expenditure for primary, lower secondary and upper secondary education with other comparable countries. The most recent year for which data is available for most comparable countries is 2010. The costs per student are in US dollars using purchasing power parity (PPP) comparisons.

The Consortium has assumed primary education in the OECD is equivalent to grades 1 to 4 in Oman. It has assumed that lower secondary and upper secondary are equivalent to grades 5 to 10 and 11 to 12, respectively. Education systems vary slightly between countries but broadly the structure is comparable.

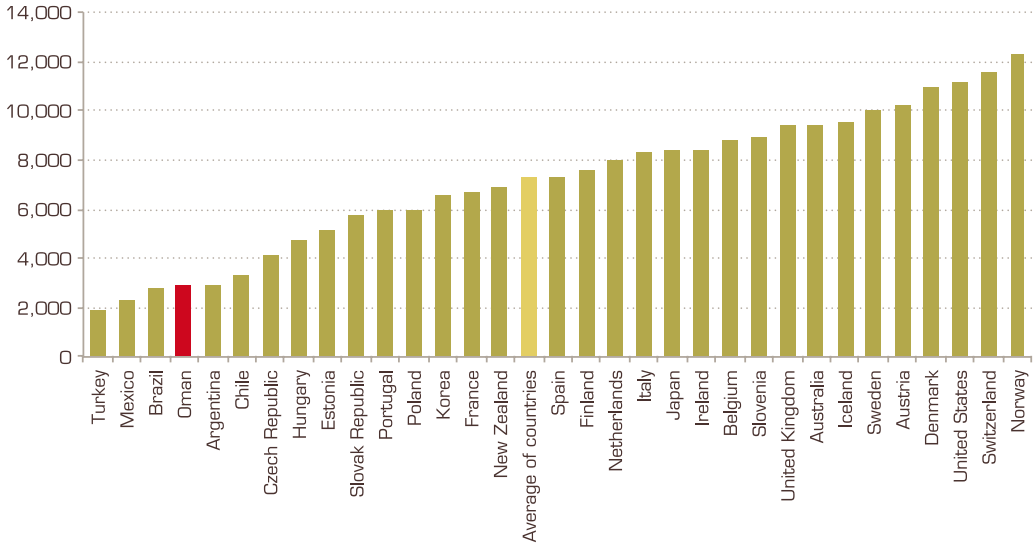
The average expenditure per student in Oman for primary education is 1,109 R.O. (Ministry of Education 2011f) or $2,883 USD.[10] This is within the range of expenditure in countries monitored by the OECD (Graph 7) and is comparable to the level of expenditure in Brazil, Argentina and Chile.[11] Expenditure per student in Oman on primary education is only 36% of the average expenditure per student ($7,974) for the comparable countries, which is unsurprising given the higher national income of some of these countries.

10 The cost per student at different levels is not able to be extracted from the official management information system because spending is not coded at the individual school or regional level. Instead the cost per student is calculated from overall spending using assumptions including fixed student to teacher ratios. The official estimates do not include the effect of recent reductions in the student to teacher ratio.

11 The OECD dataset on average expenditure per student only includes two non–OECD G20 countries, being Brazil and Argentina.

Graph 5.7 Expenditure per student for primary education in 2010

Equivalent US dollars per student

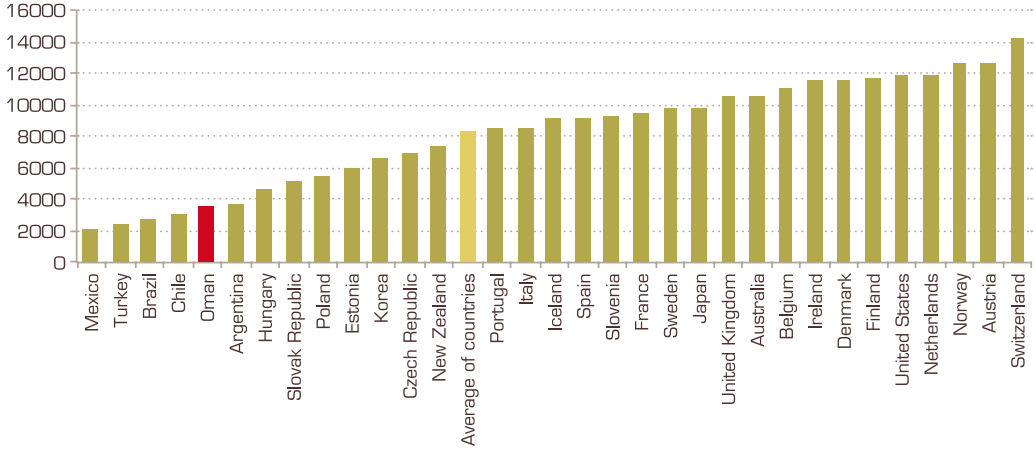


Source: NZIER, OECD Education at a glance 2013

The average expenditure per student in Oman for lower secondary education is 1,346 R.O. (Ministry of Education 2011f) or $3,500 USD. This is within the range of expenditure across the corresponding countries (Graph 5.8) and is comparable to the level of expenditure in Brazil, Argentina and Chile. However, expenditure per student in Oman on lower secondary education is only 40% of the average expenditure per student ($8,641) for comparable countries.

Graph 5.8 Expenditure per student for lower secondary education in 2010

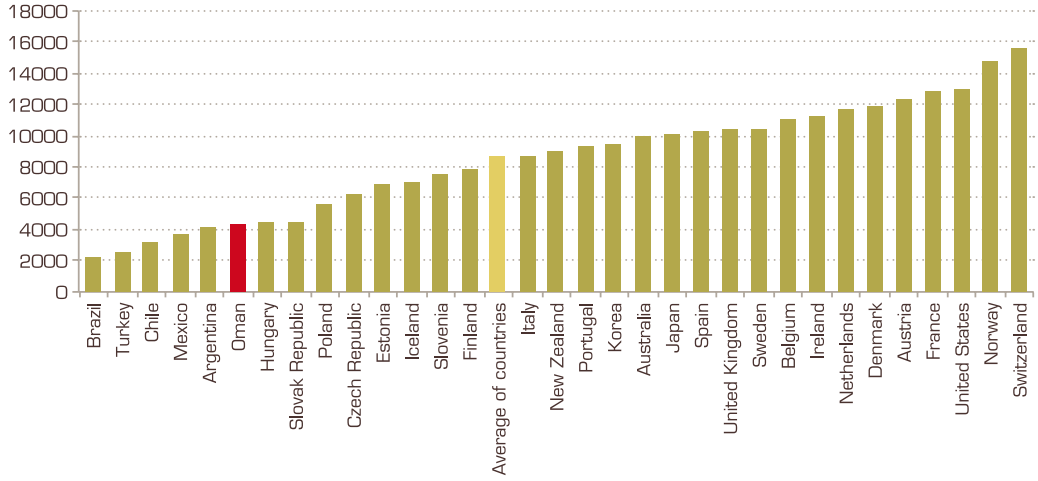
Equivalent US dollars per student



Source: NZIER, OECD Education at a glance 2013

Graph 5.9 Expenditure per student for upper secondary education in 2010

Equivalent US dollars per student



Source: NZIER, OECD Education at a glance 2013

The average spend per student in Oman for upper secondary education is 1,673 R.O. (Ministry of Education 2011f) or $4,350 USD. This is within the range of expenditure for comparable countries (GraphGraph 5.9 Expenditure per student for upper secondary education in 2010). However, expenditure per student in Oman on upper secondary education is only 48% of the average expenditure per student for comparator countries.

In the previous sections the Consortium compared spending per student by different OECD countries at particular education levels – primary, lower secondary and upper secondary education. An alternative way to consider the appropriateness of expenditure per student is to review relative spending between levels and look at how relative spending differs between countries.

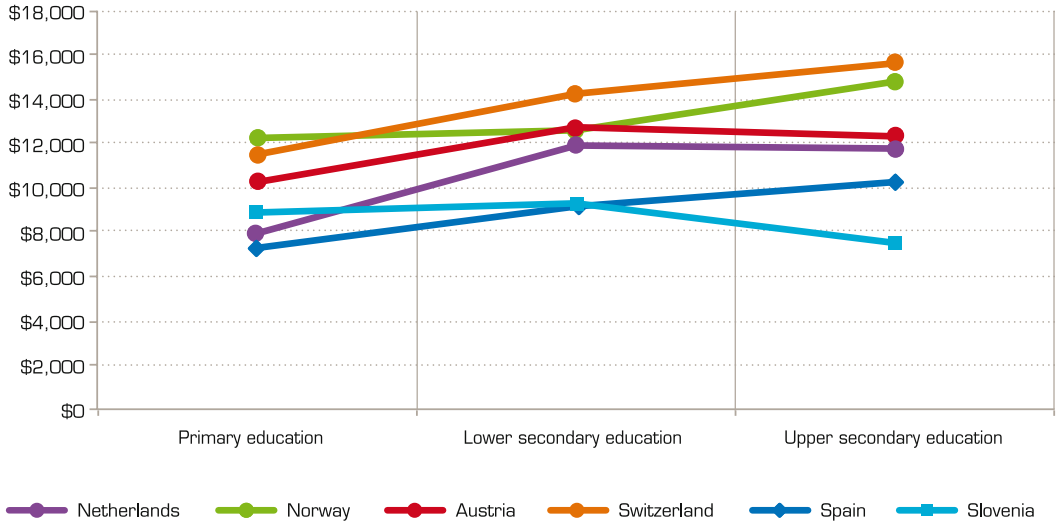
The Consortium compared Oman[12] with 31 countries using 2010 data. GraphGraph 5.10 Expenditure at different levels for selected countries compares Oman with a small group of countries. As a general statement the Consortium found that most countries increase expenditure per student as the student progresses through the education system. 78% of countries spent more on lower secondary education than on primary education and 56% spent more on upper secondary than on lower secondary.

The Omani pattern of expenditure at different levels of education (increasing expenditure with each level) is in line with the pattern in the majority of countries in the comparison. Therefore, the Consortium concluded that the relative Omani expenditure per student at different levels of schooling appears to be structured appropriately. The size of the difference between levels varied significantly between countries and precludes any judgment about what is the appropriate difference between levels of education.

12 The official estimates were average costs per student for grades 1-4, 5-10, 11-12 from the Annual Statistics for 2010/11.

Graph 5.10 Expenditure at different levels for selected countries

$US per student



Source: NZIER based on OECD Education at a glance 2013 and Ministry of Education Annual Education Statistics Book 2010/11

5.3 How the Budget is Allocated Across the Schooling Sector

The budgeting and other management systems that apply to the schooling sector sit within wider national systems. There are three main national systems – planning and finance, civil service, and procurement. The design of any reforms to improve the performance of the schooling system needs to be compatible with the national systems.

In commenting the 'appropriateness of how the budget is allocated across the schooling sector' the Consortium have considered:

- The budgeting system.
- What budgets are spent on.
- How spending is approved and monitored against budget.
- What processes are in place to evaluate the outputs from the spending.

The examination also led the Consortium to conduct a brief review of the current financial management systems.

5.3.1 The budgeting system

Oman's 8th Five Year Strategic Plan (2011-2015) sets the medium term policy framework and is supported by a five-year financial plan. These plans are at a national level and focused on estimated activities, for example, building of new schools. The annual budget is based on delivering the five-year plan. Capital budgeting is linked to the national plan. In education, capital spending is around 8% of total education spending and is dominated by the construction of new schools and additions to existing schools (75% of capital spending).

The Omani budgeting system is based on line item or input budgeting. All Ministries use the national classification system, which has around 70 recurrent items. Using input based budgeting, Ministries get funding compensation for input decisions over which they have no control such as staffing numbers and pay scale changes. Thus there is a soft budget constraint on salaries and allowances. Non-personnel spending on other inputs faces tougher budget scrutiny. This creates technical efficiency as it biases spending towards labour and away from other complimentary inputs such as teaching resources. This is particularly important for education where, for example, increasing the number of teacher inputs in order to reduce class sizes is an expensive and inefficient means of improving educational performance.[13]

13 Apart from the early years, there is limited compelling evidence that reduced class sizes improve student (Hattie 2005).

5.3.2 What is the money spent on?

Table 5.3 shows the main expenditure items in education. Despite the large number of items in the budget process, nearly the entire budget is spent on staff salaries or allowances as is shown in the following table.

Table 5.3 Allocation of education budget 2007/08 to 2011/12

Type	2007/08	2008/09	2009/10	2010/11	2011/12
Salaries	52.3%	51.2%	48.1%	45.9%	45.1%
Allowances	36.9%	37.4%	35.8%	39.7%	40.3%
Other allowances	1.3%	1.1%	7.0%	2.1%	2.4%
Total salaries, allowances and other entitlements	90.5%	89.7%	90.8%	87.7%	87.8%
Commodity expenses	1.4%	1.6%	1.5%	1.8%	2.1%
Service expenses	6.5%	6.6%	6.4%	8.3%	8.0%
Government services expenses	0.9%	1.0%	0.9%	0.9%	0.7%
Furniture and equipment	0.6%	0.8%	0.2%	1.2%	1.0%
Other	0.1%	0.2%	0.1%	0.1%	0.2%
Total Annual Budget (million RO)	**531.9**	**584.1**	**672.7**	**749.9**	**879.7**

Source: Ministry of Education (Oman), 2013

The above table emphasises the importance of school staffing decisions (number of teachers, rates of pay and allowances for teachers) on the total education budget. Approximately 90% of the total education spending is in payments to staff. The payments to staff comprise a base salary plus up to 14 different allowances, each with their own set of rules and claims processes.

Ministry of Education staff members are part of the Omani civil service. The rules governing conduct and terms and conditions of employment are all set centrally. In the 2011 Budget all civil service salaries were increased by 3% (so long as they had six months of service and did not receive a 'weak' performance evaluation).

On 11 November 2013 the government announced that effective from 1 January 2014 the grades, salaries and allowances would be unified across the civil service. The effect of this decision would be to increase the budget for base salaries by 39%. A committee has been set up to review working allowances and other allowances so they could be rationalised in the future.[14]

Staffing positions are set centrally by a Royal Decree from the Sultan. There are no part-time positions in the civil service. Fixed staff positions, civil services rules and limited use of part-timers reduce flexibility and the ability to redeploy staff resources.

14 Oman Daily Observer 12 November 2013, Vol. 32, No 363 page 1.

Comparison of the education spending data with the data in Table 5.4 below on the student and staff (teacher plus administrator) numbers over the period 2009 to 2012 suggests the following:

- The number of staff has increased by 23 percent while the number of students has fallen by 4 percent.
- The average cost per staff member has increased by 20 percent (in excess of inflation)[15].

The Consortium discusses the allocation of resources to staffing further in section 5.3.4 Budget allocation to staffing.

Table 5.4 International comparison of education spending (2010)

	Spending on teachers	Spending on all staff	Spending on other
OECD (primary) average	61%	79%	21%
OECD (secondary) average	62%	78%	22%
Brazil (secondary)	NA	75%	25%
Argentina (secondary)	67%	92%	8%
Oman (combined schooling levels)	70%	91%	9%

Source: NZIER based on OECD data and Ministry of Education and the Consortium's estimates for Oman

Table 5.4 compares OECD and selected G20 countries with Oman's share of current spending on different educational inputs. It compares spending on teachers' salaries and allowances, all staff salaries and allowances, along with all other current spending. Oman spends 91% of the current education budget on salaries and allowances and 9% on other inputs. In Oman, transport (6%) makes up the bulk of other spending, leaving little budget for direct education inputs. By way of comparison Finland and Korea (the OECD countries with the highest student achievement based on PISA and TIMSS data) spend between 30% and 35% of the total education budget on inputs other than staff.

5.3.3 How is spending approved and monitored?

Strong accounting control exists throughout the system based on the financial law which sets the financial management framework. There is centralised control of cash by the Ministry of Finance. Local offices submit vouchers to regions (governorates) which are checked before being passed for further checks by the Ministry of Education. Payment is authorised and funds paid to the Ministry of Education for payment to service providers. The Ministry of Education has an internal audit unit. There is very limited local financial discretion. For example, the Ministry of Education allocates schools a petty cash allowance on an annual basis (usually between 2000–6000 OMR). Schools also have access to the proceeds from school markets (tuck shops) for direct school use.

15 Oman's rate of inflation increased temporarily to about 12 percent in 2008 before falling back to around 4 % over 2009 to 2011. The increase in average cost per staff member seems to follow the increase in inflation with a one year lag, but the Consortium does not have data on staff numbers for 2008 that it would need to test this assessment.

These processes mean that spending requests are considered on a transaction-by-transaction basis for compliance with a set of rules. There is a mis-match between the effort applied to approving spending transactions and the main drivers of the education budget which are discussed below.

The standardised input classification is theoretically useful for control purposes but is less helpful for the purposes of analysis and decision-making. For example, it does not distinguish between the spending at different levels (discussed in the previous section) or separate direct spending on core teaching activities from non-core auxiliary and support activities. Consideration could be given to greater use of coding to support programme or output based budgeting to provide more useful management information for decision-making[16]. Some countries, such as Kenya, have moved to programme budgeting for decision-making purposes while retaining input based budgeting for appropriation and control purposes.

The other issue with input budgeting is the effect unforeseen and random events that are unbudgeted. The paradox of budgeting is that compliance with good process does not necessarily ensure good outcomes. In centralised systems everything is controlled from the centre which can have unintended and perverse consequences. The problem the centre has is it has control over compliance with input controls but limited influence over outputs, performance and student achievement.

To illustrate this point the analyses of trends 2009 to 2012 showed:

- Nearly 90% of the budget was spent on remuneration over the period 2009 to 2012.
- Low allocation to non-salary inputs linked to teaching and learning.
- Rapid growth in the number of administrators relative to teachers, students and classes.
- Wide disparity in ratios of administrators to students, students to classes and teachers to students across regions.

The World Bank (2012) also found the first three of these trends over the period 2006/2009.

Key interviews with senior Ministry of Education Finance Directorate staff indicate that central controls may not be effective in linking approval of individual spending requests to monitoring performance against budget, let alone outputs. In particular the answers to the interview questions suggest the following gaps in the budget approval and monitoring process. The Finance Directorate:

- Does not have documentation setting out the methodology used by the Ministry to allocate the budget to Directorates.
- Allocates an annual budget against specified categories based on expenditure over the past three years and development projects for the next five years without input from the Directorate.
- Considers Education Ministry Directorate budget requests on a case-by-case basis at any time during the financial year.
- Does not provide regular (during the year) reports of expenditure against budget cost category to each Ministry Directorate.
- Does not currently code expenditure in its Integrated Financial System by Governorate (except Dhofar), Directorate (except Scouts and Guides Directorate), Department or Section (codes will be active for five Governorates, two Directorates and the National Career Guidance Centre in 2014).
- Does code expenditure by Governorate, Directorate, Department or Section in its own financial system but has no functionality for electronic reporting of expenditure to each Governorate, Directorate, Department or Section.

16 Programme budgeting allocates resources to operational programmes or activities while output based budgeting (OBB) allocates cost to deliverables. The difference is illustrated by policy advice which apportioned to different programmes is under programme budgeting but is a separate output under OBB.

The lack of reporting on the aggregate effect of the decisions approved by the centre limits the ability of a Governorate, Directorate, Department or Section to monitor its performance against budget. It also hinders the Finance Directorate's capacity to assess the consistency of its decision-making, measure approval rates or compare the expenditure requests of Governorate, Directorate, Department or Section and analyse the reasons for difference or indicators of trends.

One example provided to the Consortium where a decentralised system can be more effective and efficient than a centralised system is the process of applying for maternity leave. Under the current system in Oman a pregnant teacher must write to the principal. The principal then writes to the regional office. The regional office then writes to the Ministry of Education to seek approval for the maternity leave. Once a decision is made, the Ministry office writes back to the regional office, which then proceeds to notify the principal in writing. This process has been known to take so long the teachers have had to leave prior to approval because they have given birth. As a result the students do not have a teacher until one has been appointed by the Ministry of Education.

One possibility, as part of the decentralisation programme announced in the 8th Five-Year Plan, would be greater delegation to schools of employment matters. By way of example, if schools were delegated budget and discretion to hire relief teachers, this would improve teacher contact hours with students.

More importantly, the high proportion of the education budget spent on staff suggests a mis-match between the effort applied to approving spending transactions and the main drivers of the education budget. A single approval to employ a staff member commits the Ministry to on-going expenditure on salary and allowances (and annual adjustments). However, it appears that most of the spending approval effort is directed at one-off transactions that account for about 9% of the budget and where the decision does not commit the Ministry to recurring expenditure.

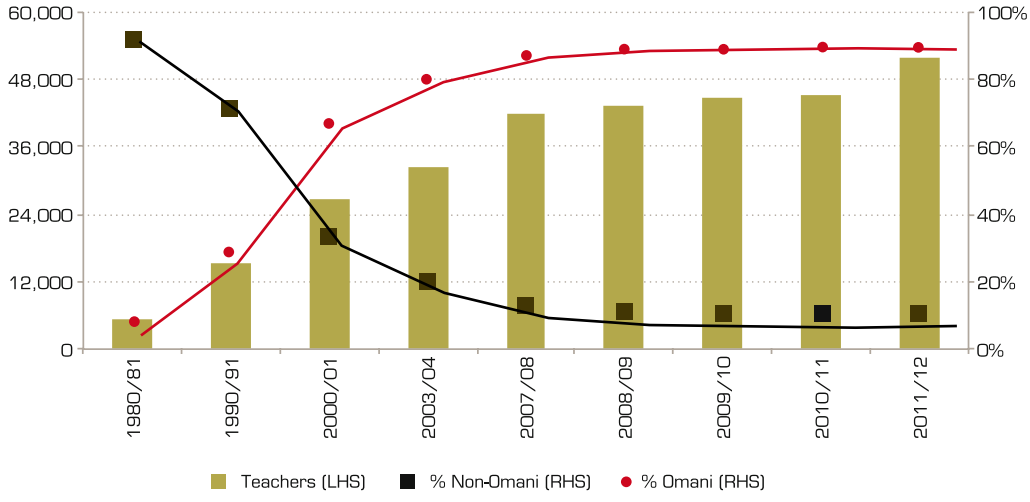
5.3.4 Budget allocation to staffing

As staffing is the main driver of education spending it is important to assess and evaluate the drivers of this area of spending and the contribution it is making to the delivery of education outputs.

Increasing staff numbers

Since 1980 Oman has made substantial progress in increasing the number of teachers employed in the education system (Graph 5.11) while at the same time reducing the reliance on expatriate teachers. In 1980/81 92% of teachers were not Omani but by 2008/09 89% of teachers were Omani. More recent statistics indicate that the percentages of expatriate teachers has stabilised at 10–11% and since then the share of Omani teachers has plateaued.

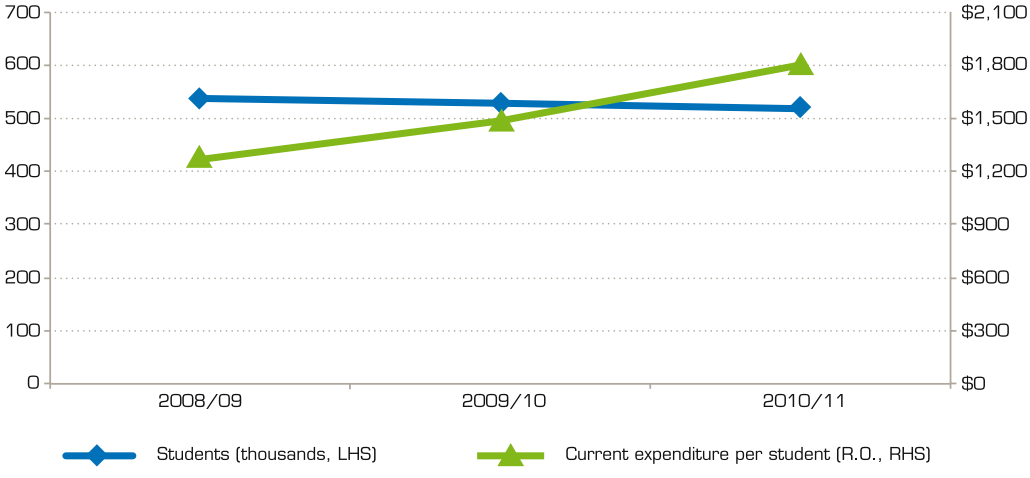
Graph 5.11 Growth in teachers 1980 to 2012



Source: NZIER analysis based Ministry of Education Annual Education Statistics Books for 2008/09-2011/12 and World Bank (2012)

Since 2000, while total enrolments have decreased, real spending along with the number of teachers has increased slightly and the number of administrators has increased sharply. The growth in administrators and teachers since 2008 is shown in Table 5.5. The combined effect of declining student rolls and increasing teacher numbers and salaries is the significant increase in the cost per student. This growth is shown in Graph 5.12.

Graph 5.12 Rising average cost per student



Source: NZIER based on the Ministry of Education Annual Educational Statistics 2008/09-2010/11 and Omani annual accounts

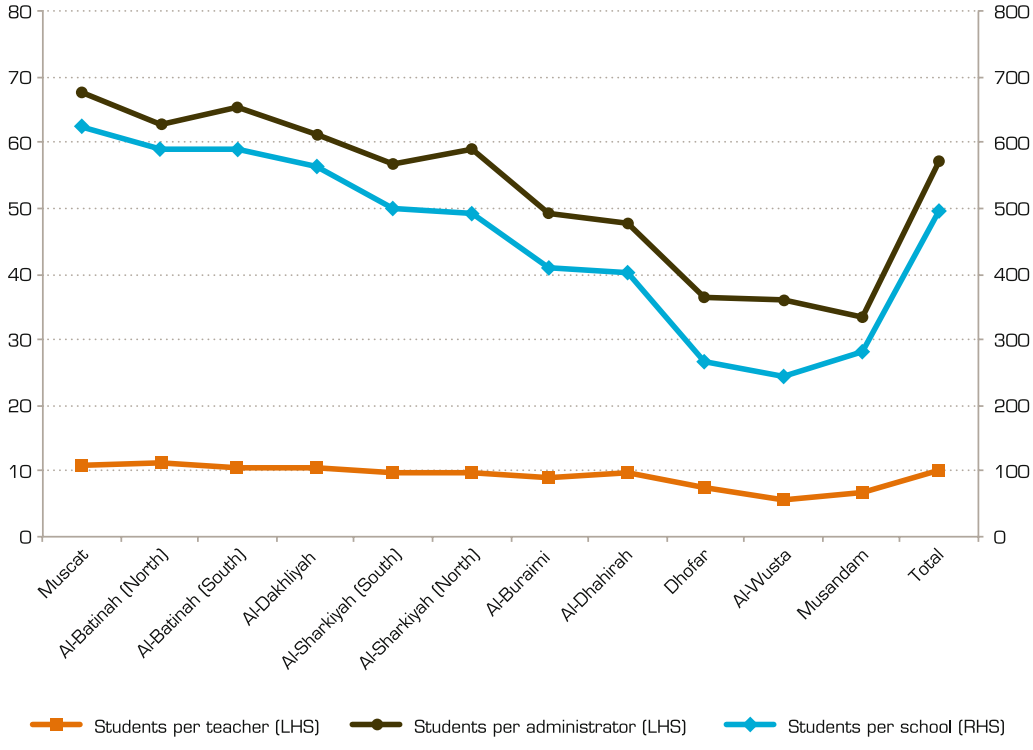
Link to outputs

Graph 5.13 shows how the regional distribution of teachers, administrators and schools relative to the number of students in the region varies significantly. For example, the number for students per teacher ranges from 6.6 (Al-Wusta) to 11 (Al-Batinah North.) Similarly, the number of students per administrator ranges from 33 (Musandam) to 68 (Muscat).

The almost 100% variation in administrator to student ratio from the lowest to highest governorates reflects the allocation formula of staff to schools. There is no provision for part-time staff so any fractional allocation is rounded up. Any school with up to 500 staff gets the same fixed allocation of administrative staff. Thus very small schools can have more staff than students. As personnel costs make up 90% of the total budget it does raise a series of questions about the efficiency of the way the Ministry of Education allocates administrative staff to schools.

It is possible in centralised input based systems to ensure control over the number of administrators and teachers relative to the number of students. For example, in the New Zealand system with site-based management of schools, schools receive teaching and support staff resources based on a formula. This formula uses a range of factors such as the number of students, the school's relative isolation and makes an adjustment for the socio-economic status of the community.

Graph 5.13 Student per resource by educational governorate



Source: NZIER based on the Ministry of Education Annual Educational Statistics Book 2011/12

A striking trend in Oman over the last decade has been the reduction in student to teacher ratios (STRs) associated in part with the move from the general to the basic education system. It has coincided with the drive to increase the number of Omanis in the civil service and increase public employment. Since 1995 student teacher ratios have fallen from 22 to 10 in 2011/12. At 10.0, Oman has one of the lowest STRs in the world and is almost half the global average of 18. Low STRs are inconsistent with an effective value for money schooling system. This is because increasing the average number of teachers per student is expensive and has been relatively ineffective as teacher contact hours have not increased proportionately with the number of teachers.

Table 5.5 Teachers, administrators and students – 2008/09 to 2011/12

Year	Students	Teachers	Administra-tors	Classes	Students per teacher	Students per administrator
2008/09	540,332	43,149	6,400	19,667	12.5	84.4
2009/10	531,393	44,506	8,402	19,399	11.9	63.2
2010/11	522,520	45,132	8,685	19,296	11.6	60.2
2011/12	517,053	51,811	9,057	18,904	10.0	57.1

Source: Ministry of Education (Oman) Annual Statistics Books for 2008/09, 2009/10, 2010/11 and 2011/12

Table 5.6 Factors driving spending on teachers

	Student instruction time (Hours per year)	Time teachers spend teaching (Hours per year)	Teacher/ student ratio	Class sizes
OECD average	926	707	13.3	17.3
Oman average	821	411	10.0	28

Source: NZIER based on 2011 OECD data and the Consortium's estimates for Oman

Somewhat paradoxically, while student to teacher ratios have been reduced dramatically, average class sizes have remained high. Table 5.6 above compares Oman with the OECD average for lower secondary schools in 2011. While Oman's teacher student ratios are slightly lower than the OECD average, class sizes are dramatically higher. The practices leading to the disjuncture between low teacher pupil ratios and high class sizes is discussed in the section on school culture.

5.3.5 System improvements

The examination of the budget allocation process also led the Consortium to review briefly the financial management systems. There are a number of gaps in the financial management at the aggregate system level:

- Limited use of coding (by governorate, department or directorate).
- Limited management reporting capability due to the lack of integration of multiple management information systems.
- The lack of an annual internal budgeting system within the Ministry.

The lack of systematic internal budgeting, coding and reporting limits the ability to monitor performance against budget, hinders the capacity to assess expenditure requests or analyse the reasons for aggregate patterns and trends.

Since 1970 the focus of schooling policy has been to expand education for a few schools to schools across the whole country. Current financial management systems reflect the historical imperative to 'expand capacity to enable increased participation'. The financial management system needs a 'reset' to focus on the new imperative – 'improving the quality of teaching and increase student achievement'.

Oman could achieve effectiveness gains from developing a comprehensive annual internal budgeting process decoupling the internal issue of the resourcing of schools from the external systems required for appropriation purposes. While Oman retains input based budgeting for appropriation and control purposes, there is scope to move to more output/programme budgeting for internal management decision-making.

The financial management system needs a 'reset' to focus on the new imperative– 'improving the quality of teaching and increase student achievement'.

The Ministry of Education is planning to invest in a new Financial Management Information System (FMIS) that will integrate with the legacy Ministry of Finance system (for budget control purposes) and be used for internal resource planning purposes. In the future consideration could be given to greater integration with data from the new online assessment centre.

The new FMIS will be used for control purposes but it also offers the opportunity to provide a step change in the provision of information and analysis to support decision-making. The new FMIS needs to include certain functionality that is lacking in the current system, including:

- A coding structure that supports external reporting on an input basis as well as internal management reporting on an output basis.
- Management reporting capability based on user specifications for decision-makers at school, governorate and national levels.
- Interoperability with other systems that enables data to be imported on student assessment and achievement, school infrastructure information etc..

Financial management has a key role to play in lifting educational performance. At present there are financial control systems that track authorisations for how resources are spent. In the future the Ministry will need systems that track how effectively the funds have been spent.

Achieving a step change in educational performance requires a unified focus across the system of the factors that directly or indirectly drive the quality of teaching. This will require more systematic integration of data collected so that information can be used to inform decision making about the aggregate effect of budget allocations. In addition to the investment in FMIS and online assessment centre, generating important information will require greater integration of management information systems and strengthening of the analytical decision support capability.

While centralised systems have control over conformance with input controls, they have limited influence over teacher performance and student achievement. Over time the centre needs to give up attempting to control the little numbers (spending on individual inputs) in order to get control of the big numbers (teacher delivery and quality, student performance). Greater focus on budget allocation at the system level would improve the efficiency and effectiveness of the schooling sector. This will require increasing the focus in the internal financial management accounting systems on outputs, improved reporting functionality and greater integration of management information systems.

5.4 Appropriateness of Decentralising Budget Decisions to Governorates and Schools

In any review of the structure of the school education sector, the extent of centralisation and decentralisation is an important element. Centralisation refers to the situation where all administrative authority for education is vested in a central body. Decentralisation refers to the situation where authority for one or more budget items is delegated to regional offices and down to individual schools. In different jurisdictions there are significant differences where decisions are made about the content of the curriculum; control of the budget; responsibility for employing and deploying teaching and other staff, setting pay and other conditions; building of educational facilities; and policies for information and administration.

The general discussion of the strengths and weaknesses of centralisation relative to decentralisation is older than the study of public administration itself. There is a large and growing literature, that is not limited to education, on decentralisation across government. Unfortunately, the discussion in this literature is clouded by the lack of agreement of the meaning of the terms – different authors make different distinctions and sometimes use the same terms to describe different phenomena.

Table 5.7 Strengths of centralisation and decentralisation

Factors that favour centralisation	Factors that favour decentralisation
Allocation across the whole system is necessary.	Local knowledge, information and relationships are critical to successful decision-making.
Coordination, coherence and consistency across the public sector are critical to success. Risk is best managed by the government.	Local customisation, innovation and flexibility are critical to success.
Achieving economies of scale and scope.	Local community involvement, participation and empowerment are critical to success.
Incentivising outcomes is not contractible.	The delegation of operational matters improves the efficiency of resource utilisation.
Uniform standards and guidelines across the education sector are critical to success.	

Source: NZIER based on Brady NZ Treasury (2002)

Decentralisation is a two-edged sword as it has both strengths as well as weaknesses. Utomo (2009) observes "The decentralisation wave around the world has offered many positive results such as combating corruption, reduction in poverty, improving service delivery, fortifying accountability, preventing conflicts, and empowering communities. On the other hand, decentralisation may lead to soft budget constraints, macro economic instability, clientelism, and enlargement of bureaucracies" (references cited are omitted but are available in the original). Table 5.7 discusses the factors that favour centralisation and contrasts them with factors that favour decentralisation.

Decentralisation is one of the cornerstones of the school reform movement. In the United States during the 1980s the majority of the nation's school districts with 50,000 or more students decentralised. A range of countries as diverse as Armenia, Chile, New Zealand, and the Netherlands have undertaken major decentralisation reforms.

The governance section discussed how the Oman Government operates a very centralised public management system. Within this system local discretion in decision-making is limited. Local schools and regional directorates have no, or limited, ability to manage their own budgets. Staff employment and deployment decisions are all made centrally as are decisions about pedagogy and curriculum, and school administration (e.g. terms, contact hours, and transport).

Oman is no exception to the trend to decentralise in education. The 8th Five-Year Plan highlights "expand the decentralisation of administrative and financial tasks" as one of six programmes to improve the education system. Oman is experimenting with change by piloting decentralisation of funding in five regions for a range of non-salary operational items such as education and computer supplies, routine maintenance etc.

Oman is no exception to the trend to decentralise in education.

Table 5.8 Decentralisation matrix – what and to whom

	Administrative	Budget	Political
De-concentration to regional government offices	Move managerial decisions and accountability to regional government offices.	Give regional managers greater authority to allocate and reallocate budgets.	Create regional, elected bodies to advise regional managers.
Devolution to local governments	Move responsibility to managers appointed by elected officials at local or regional level.	Give local governments power to allocate education spending and, in some cases, to determine spending levels (i.e. through raising additional revenues).	Elected regional or local officials of general purpose governments are ultimately accountable both to voters and to the providers of finance for the delivery of schooling.
Delegation to schools and/or school councils	School principals and/or school councils empowered to make personnel, curriculum, and some spending decisions.	School principals and/or school councils receive government funding and can allocate spending and raise additional revenues.	School councils are elected or appointed, often with power to appoint school principals.

Source: Based on Winkler & Gershberg Table 1 (2003)

In education there are two important questions – what is to be decentralised and to whom? In regards to **what** is to be decentralised, Table 5.8 distinguishes three categories: administrative (staffing), financial (budgeting) and political decentralisation.

The second question is if budget, personnel and programmes are to be decentralised, to whom is authority decentralised – regional offices, local government or local schools? These options are shown in the columns of Table 8. *De-concentration* involves redistribution of authority to regional government offices (governorates), *devolution* redistributes authority to local government[17] while delegation involves passing authority to local schools.

In education de-concentration is sometimes used as an intermediate step away from a highly centralised system that would enable a subsequent move to full delegation – school based management. The World Bank identified four models of school-based management (SBM):

- *Administrative-control SBM*—in which the authority is devolved to the school principal.
- *Professional-control SBM*—in which teachers hold the main decision-making authority to use their knowledge of the school and its students.
- *Community-control SBM*—in which parents have the major decision-making authority.
- *Balanced-control SBM*—in which decision-making authority is shared by parents and teachers." (Barrera-Osorio et al 2009).

Across a number of countries there has been a trend to greater decentralisation. In the case of Oman, the main focus of initial decentralisation initiatives is on de-concentration to governorates.

Because decentralisation is a multi-dimensional concept, drawing lessons from other countries' experiences is complex. It is difficult to unpack the gains from a reform programme and attribute the gains achieved to specific elements of decentralisation and distinguish them from changes in resources and changes in programmes and pedagogy.

Mourshed et al (2010) identified six interventions that were common to all schooling systems that lifted system performance. These include:

- Revising the curriculum and standards.
- Reviewing rewards and remuneration structures.
- Building the technical skills of teachers and principals with structured training initiatives that are applied systematically and consistently.
- Assessing student learning.
- Using student assessments to improve the quality and productivity of teaching.
- Establishing national guidelines and educational regulations.

These interventions should remain the focus of the centre. Also identified were unique intervention clusters that depend upon where a schooling system sits on the continuum from 'poor' to 'excellent'. The move to site or school-based decision-making was identified as a key intervention in moving from 'good' to 'great'. Site-based management was not considered a feature of successful interventions to move from 'poor' or 'fair'.

17 The first municipal council elections wre held in December 2012.

Winkler & Gershberg (2003) draw the following lessons from African and South American experiences with decentralisation of education systems:

- Efficiency and effectiveness are most likely to improve under decentralisation when service providers — schools, local governments, or regional governments — are held accountable for results.
- Accountability requires clear delineation of authority and responsibility and transparent and understandable information on results (both educational and financial).
- Decentralisation of real decision making power to schools or school councils can significantly increase parental participation in the school, and high levels of parental and community participation are associated with improved school performance.
- Decentralisation of education to sub-national governments does not in and of itself empower parents and improve school performance. Further decentralisation to schools (school councils or school boards) or local communities does empower parents and can improve school performance.
- For decentralisation to schools to be successful, principals must acquire new skills in leadership and management of teachers, and working with the community.
- The design of financial transfers to sub-national governments or schools has powerful effects on both efficiency and equity.
- Decentralisation requires that national and/or regional ministries of education be restructured; failure to restructure ministries is a serious obstacle to realising the benefits of decentralisation.
- The decentralisation of teacher management is critical to creating accountability and realising the potential benefits of decentralisation.
- National education Ministries frequently resist decentralisation on the grounds that sub-national governments, communities, and/or schools lack the capacity to manage education. In practice, this is seldom true.
- Real decentralisation is a long, evolutionary process.

In summary, decentralisation per se is not a panacea. Decentralisation has strengths and drawbacks as shown in Table 5.7. Hanushek et al (2011) use PISA data to show that in developing and low performing countries, decentralisation to schools actually reduced school effectiveness and student achievement. By contrast, there was a positive relationship between greater school autonomy and student achievement in most OECD countries. Thus decentralisation has a critical role to play in the right circumstances once a certain level of performance has been reached.

An objective to shift the focus to improving the quality of education in order to improve student achievement requires a smarter centre that focuses on what matters. What matters is improving the quality of teaching and setting standards through curriculum development and school accountability. Decentralisation still requires a strong centre but also a smarter centre that will need to change the way it works.

Decentralisation can take a number of forms – de-concentration to regions, devolution to local authorities and delegation to schools. Across a number of countries, while the details differ, there has been a trend to greater decentralisation through delegation to schools.

In the case of Oman, the main focus of initial decentralisation initiatives is on de-concentration to five governorates of responsibility for non-salary operational items. The decentralisation pilot has highlighted the imperative to improve the management accounting information available in the regions and enhance the limited reporting capability of the accounting system. Over time once the systems have been developed, this decentralisation could be extended to other regions, other items (salaries and allowances, bonuses, scholarships, overseas travel) and ultimately to schools.

In time, the pilot of greater delegation to schools could also be extended. One possible first step would be to allow greater delegation and flexibility in employment. For example, if schools were delegated the funding and discretion to hire relief teachers it would improve teacher contact hours with students.

Regardless of the precise coverage and form of decentralisation, the decision to decentralise must be based on careful issue-by-issue analysis of the context, the binding constraint facing the sector and a credible assessment of the value of decentralisation over centralisation. Even in a decentralised system there is still the on-going need for a smart strong centre. Such a centre works differently as it shifts the focus from centralised control to lifting student achievement and system performance.

Conclusion

There is no absolute measure of the appropriate share of education spending for any education system in any country. Oman relative education spending as % of both total public spending and GDP is around the OECD average and at the top of the bottom quartile of the range for the comparable countries.
Oman's current expenditure of education would indicate that it has reached the stage where the level of spending will only provide diminishing returns in terms of value for money spent.

Official statistics suggest that Oman is consistent with the majority of OECD countries in that it is increasing expenditure per student as education progresses from Grades 1 to 12. As well the indicators are that the average spend per student at different levels is within the range of expenditure that is also very similar with that of comparable countries

Official statistics suggest that Oman is consistent with the majority of OECD countries in increasing expenditure per student as education progresses

The Oman Ministry of Education needs to put greater focus on the determining the effectiveness of its spending. In doing so it needs to consider that since 2005:

- 90% of the budget was spent on remuneration.
- It has had rapid growth in the number of administrators relative to teachers, students and classes.
- There has been low allocation to non-salary inputs linked to teaching and learning.
- A wide range in administrator to student ratios across governorates may indicate a need for consideration of Ministry equity in spending.

There is currently a lack of systematic processes for internal budgeting, coding and reporting at a level that would allow system leaders to identify the financial cost and efficiency of their decisions and initiatives.

The Ministry of Education is aware of a number of constraints with its current financial processes and financial management systems and is the process of planning for the implementation of a new Financial Management Information System. There is a significant opportunity in this development to identify the management accounting needs of the education system leaders for effective decision-making and to incorporate these into the new Financial Management Information System. This will require greater integration of management information systems and developing an output based internal financial management accounting system wide retaining the input based functionality required for reporting to the Ministry of Finance.

Better financial accountability within central funding structures along with improved financial data will allow better control of key performance indicators. This will enable the Ministry greater focus on what needs to be managed in a centralised way e.g. teaching programmes and pedagogy.

The Ministry can then move cautiously toward decentralised financial management systems. Once first steps of decentralised financial control are in place and proving successful, there is scope to decentralise further decision-making to the regions and ultimately to the schools.

Table 5.9 Report summary

Focus	Research Question	Stylised Facts	Research approach	Conclusion
Appropriateness of the share of the government budget allocated to the Ministry of Education	Is the education budget large enough?	Positive relationship between resources and student results up to a threshold.	Literature scan and international comparison using total education spending as a % of public spending and GDP.	There is no absolute measure of the appropriate share of education spending. Oman relative education spending as % of both total public spending and GDP is around the OECD average and at the top of the bottom quartile of the range for the comparable countries. Oman's national income is at the level that diminishing returns from spending come in.
Appropriateness of costs per student allocated to basic education cycle one and two and post-basic education	How does the average national spending profile by grades 1-12 compare to other countries? Is the profile consistent with good practice?	Quality of teaching is more important than the level of spending per student.	International comparison of cost per student at each level.	Official statistics suggest that Oman is consistent with the majority of OECD countries in increasing expenditure per student as education progresses. The average spend per student at different levels is within the range of expenditure across the OECD members and that of comparable countries.
The effectiveness and efficiency of the way the Ministry allocates its financial budget	What explains the allocation of the budget to different input types and levels (schools, governorates, national)? Does this result in unexpected patterns?	The quality of spending is critical for learning outcomes.	Review the procedures for allocating funding between different input types and levels (schools, regions, national).	Greater focus is required on the effectiveness of spending on schooling. Since 2005: • 90% of the budget was spent on remuneration. • Rapid growth in the number of administrators relative to teachers, students and classes. • Low allocation to non-salary inputs linked to teaching and learning. • Wide range in administrator to student ratios across governorates Systematic internal budgeting, coding and reporting is lacking
Appropriateness of decentralising budget decisions to governorates and schools	What is the extent of decentralisation and how does it compare to other countries?	School governance matters but in low performing countries site based school management can reduce performance.	Comparative institutional analysis informed by literature on site-based management and international comparisons.	All systems are a mixture of centralised and decentralised decision-making. Once management systems are in place there is scope to decentralise decision-making to the regions and ultimately to the schools. This will enable the centre greater focus on what needs to be managed in a centralised way e.g. teaching programmes and pedagogy.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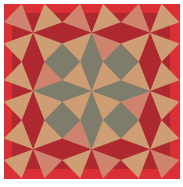
SECTION 3

EDUCATIONAL ASPECT EVALUATION

CHAPTER 6

APPROACH TO EVALUATION OF EDUCATIONAL ASPECTS



Part Three of the Report on the Evaluation of the Education System (Grades 1-12) responds to the Terms of Reference request for an evaluation of six defined educational aspects of the system, covering 29 distinctly detailed components.

This chapter outlines the evaluative approach taken, setting out the:

- Principles informing how the evaluation was undertaken
- Sources of data and information drawn on in developing the aspect chapters
- Structure of each aspect chapter, and
- Evaluative criteria applied to each component within the aspect.

The development of Oman's school system is contextualised with particular attention to the philosophy within which Oman education is embedded. This is followed by a brief account of the context of each of the six educational aspects.

The six educational aspects and their components are set out in the following table:

Aspect	Component
1. Student Learning	• Student performance. • Academic support. • Inclusive education. • Learning contact time.
2. Teachers	• Classroom effectiveness. • Workload. • Instructional support systems. • Subject supervision. • New teacher training and support. • Professional development. • Job satisfaction. • Accountabilities and incentives.
3. School Culture	• School effectiveness. • Supervisors. • Student regulations. • Parents and local community. • School support systems.
4. Curriculum & Assessment	• Scope and sequence. • Values. • School study plan. • Teaching and learning methodologies. • Assessment systems and practices. • Extra-curricular activities.
5. Relevance	• Labour market and higher education. • Entrepreneurship skills. • Soft skills.
6. Infrastructure	• School buildings and facilities. • School equipment. • School networks and internet.

6.1 Evaluative Approach

Principles informing the evaluation process

The following chapters of Part Three of the Report provide a detailed report on the evaluation of each of the components of the six aspects based on two overarching questions:

- Is the system aware of the key issues and challenges it faces in trying to achieve its desired outcomes for Omani learners?
- Are the system's responses to its key issues and challenges likely to result in desired outcomes for Omani learners?

In developing an evaluative approach for the Evaluation Project, a set of principles were adopted by the Consortium that were appropriate to both the context of Oman and the development of evaluation capability and capacity among the Omani team members (as required by the Terms of Reference).

"Building capacity within the Ministry to self-evaluate its education system will bring considerable benefits. It will help to:

- Improve the professional development of the Ministry's staff. When staff use the tools of self-evaluation they are more likely to become more self-aware, more reflective and more self-critical. It will also mean the Ministry will have the capacity to create a permanent state of ongoing evaluation of all aspects of its education system.
- Enable the Ministry to respond to social and economic change, to constantly challenge complacency and to monitor and measure the effectiveness of the education system. We need to know where we are as a Ministry, where we are going and how we will know when we have arrived."

Terms Of Reference For The Evaluation Of The Education System (Grades 1-12) Full Terms of Reference are in Appendix 1.

In developing these principles, the Consortium was mindful of Al Balushi & Griffiths' (2013: 108;123) tracing of the Oman education system's move through three time periods, each characterised by a distinct developmental approach. In the initial 'borrowing' phase the concern was to rapidly expand education services. This relied on curriculum, teachers and expertise imported from neighbouring countries. During the second 'development' phase the priority moved to improved quality. While the phase was characterised by Oman-based development of schooling it was reliant on interventions developed elsewhere and delivered by 'top-down' international expertise.

Al Balushi & Griffiths describe the third and current approach to education development in Oman as a 'collaborating' phase; a 'bottom-up' approach focused on development of what exists that draws on, and develops, existing Omani knowledge and skills. This third phase seeks to have processes that ensure that when external agencies (such as the Consortium) are involved in educational interventions in Oman, they are collaborative interventions that recognise and build upon existing Omani expertise. The aim is to sustain the intervention outcomes so that they continue over time.

With this in mind the Consortium developed evaluative instruments and processes that can be used to develop Omani capacity/capability in carrying out evaluative practices and assist Omani's to develop an evaluative mind-set. The Developmental Evaluation Approach (Patton, M. Q. (1994); (2006); (2009) is underpinned by the following principles and practices:

- Working as a team whose members collaborate to conceptualise, design and test new approaches to educational evaluation.
- Recognising Ministry officials and school communities as the 'innovators' of an evaluation process over which they have ownership.
- Taking a partnership approach that requires trust and respect between innovators and evaluators; an approach that is relationship-oriented and relationship dependent.
- Attention to context-specific understandings of evaluation procedures that are underpinned by Omani values and expectations.
- Embedding evaluative thinking that is supportive of the Ministry's goals (improved educational quality) into the evaluation structures and procedures.
- Encouraging the asking of evaluative questions and gathering information to provide feedback that supports developmental decision-making.
- Applying evaluation logic to support the development of the evaluation and its implementation at various levels of the education system.
- Holding in balance the notion of evaluation as critical thinking and development as creative thinking

1 Patton, M. Q. (1994). Developmental Evaluation. Evaluation Practice, 15(3), 311-319; (2006). Evaluation for the Way We Work. *The Nonprofit Quarterly, Spring 2006*; (2009). Connecting Evaluation to What People Know. Utilisation-Focused Evaluation. Guest Editorial. In ANZEA (Ed.), Newsletter

The evaluative approach recognised the need to take into account the central place of the learner. The Consortium resolved that their analysis of data would take into consideration the Oman education philosophy that learners should be:

- Recognised as having a unique range of competencies, range of skills, interests, experiences and aspirations.
- Entitled to a choice of learning pathways.
- Able to participate in learning experiences driven by pedagogies respectful of both the Omani and global contexts.
- Able to develop the knowledge, skills and values required for full participation in society and the economy.
- Able to establish capabilities for lifelong learning.

In arriving at recommendations, three key principles informed the Consortium's thinking:

- *Pragmatism:* what is realistic and will work for Oman?
- *Importance of Context:* learn from international and national experience but prioritise Oman reality as the prime consideration.
- *Continuity-in-Change:* recognise and build on existing strengths; address existing weaknesses; and employ evidence-based planning for change.

Sources of data and information

The six educational aspects and their components (listed above) have been examined through data and information collated from three key sources:

Evidence source	Review processes and data collection methods
External and internal document and data analysis (A full reference list is provided in the Reference appendix).	• International reports. • Ministry reports. • Ministry operational and procedural documents. • Access to the Ministry e-portal data.
School evaluation interviews, classroom observations and online surveys	• Intensive three day interviews with 28 schools during phase two of the project. • Data from an additional 37 schools interviewed and observed during phase three of the project. • On-line surveys of principals, administrators and teachers.
Ministry officials & stakeholder interviews	• Ministry of Education officials interviews. • Governorate and regional office interviews. • Interviews of stakeholders in the system.

Outline of the structure of the educational aspect chapters

Each of the educational aspect chapters are structured in the same way. For each educational aspect the Evaluation Project Terms of Reference sets out a number of components to be evaluated within the aspect.

For each component within an educational aspect the following sections are presented:

Section One provides detail of the way the system works in relation to the aspect component.

Section Two responds to the first overarching question: Is the system aware of the key issues and challenges it faces in trying to achieve its desired outcomes for Omani learners?

This section explores the extent of the system's awareness through a review of relevant documentation, data and interviews and in terms of those identified by the primary data collected and collated by the evaluation project team. The level of the system's awareness of key issues is evaluated on a three-point scale (from 'no awareness' to 'fully aware').

Section Three responds to the second overarching question: Are the system's responses to its key issues and challenges likely to result in desired outcomes for Omani learners?

The Consortium's findings with regard to the system's responses to the issues identified as most significant to the aspect are explored, and rated according to a set of evaluative criteria that are applied across all six aspects.

Evaluative Criteria and Rating Scale by Dimension

In this section, the conceptual understanding that informs the way a response has been evaluated is explained briefly according to the three evaluative dimensions: appropriateness, effectiveness and efficiency. The criteria and a 3-4 point rating scale for each dimension are also indicated.

Appropriateness: is an appropriate response being pursued?

The appropriateness of a response has to be judged relative to something. In this case, appropriateness is judged in the first instance against how the Government of Oman, through the Ministry of Education, has committed and planned its response to an identified issue (as indicated in the Strategic Development Plan and/or other Ministry documentation).

However, because of the possibility of such a response being 'politically' appropriate (in that it carries out what the Government supports) but 'technically' inappropriate (in that it does not improve how the school system works), the Consortium determined that, a response also should address the issue concerned by improving some technical aspect of service delivery to the school sector. Thus a response would be evaluated as 'appropriate' if it was both politically and technically appropriate. That is, underpinned by a stated Government commitment and meeting at least one of the following technical conditions:

- It targeted a root cause of obstructions in service delivery.
- It supported an initiative that helped fill a significant gap in the structure of services to schools.
- It supported the development of an initiative that promises to increase the efficiency, effectiveness, or sustainability of the sector's services.

It was judged as partially appropriate if it was politically but not technically appropriate. It was judged as inappropriate if it was neither politically nor technically relevant.

Appropriateness rating scale: appropriate/partially appropriate /not appropriate.

Effectiveness: is the response being effectively implemented?

The Consortium assumed that the point—and the only point—of any response is to raise educational quality by improving the workings of the education system, enhancing the intended outcomes of that part of the schooling sector to which it applies, and raising the performance levels of schools and students. Thus the identification of what the system's response is trying to achieve, the outputs and outcomes it is working towards, and whether or not they have been met, is crucial to how effectiveness is evaluated.

A key question, therefore, is: *Has the response worked?* In arriving at the answer further questions were considered, including:

- What outputs or outcomes were expected from the response?
- Were the inputs and processes (planning, resourcing, implementation, monitoring etc.) well chosen and developed in terms of expected outputs/outcomes of the response?
- Did the intended outputs/outcomes in fact occur?

The response is rated as effective if the stated outputs and outcomes have occurred or are clearly on track to be achieved. Effectiveness is rated as partially effective if some progress has been made toward achievement, but obstructions have occurred because of the choice and development of inputs and processes being less than optimal. Effectiveness is rated as likely to be effective (if successfully implemented) if a response has clear outputs and outcomes, and inputs and implementation processes are well designed but it is too early to judge the response's progress. A response is rated as not effective if there has been little or no progress in its performance and achievements, and there are no clear arrangements in place to help it improve.

Effectiveness rating scale: effective/partially effective/likely to be effective/not effective

Efficiency: Is the level of resource invested in the response appropriate, well-utilised, and sustainable?

Technical efficiency is traditionally judged by means of a cost/benefit or cost/effectiveness analysis. In a cost-benefit analysis, the outcome is monetarily defined. In a cost-effectiveness analysis the outcome is defined more broadly and focuses not just on cost but on how well the objectives have been met.

These standard technical means of assessing efficiency cannot be used for the current assignment as the cost data and other information needed is not available within the Oman education system. The Consortium, therefore, based its efficiency judgments on the available data to form a qualitative judgment of the adequacy (or excessiveness) of the resources invested and the outcomes of the effectiveness ratings (see above). To support the analysis, an additional criteria of the likelihood of the response being sustained within allocated resources was considered.

If the response had clearly achieved its intended outputs and outcomes, and there was evidence that this occurred within the allocated human, material and financial resources, and that it was sustainable within those resources, it was deemed efficient. If it was partially effective and the costs were not unreasonable and probably could be sustained, the response could be judged as of *mixed efficiency*. If the response concerned had already been evaluated as not effective, then it was clearly not efficient, regardless of the cost in terms of human, material or financial resources or their sustainability. A fourth scale *not known* was applied when there was not sufficient information to form any judgment.

Efficiency rating scale: efficient/mixed efficiency/not efficient/not known

This results in the following table as a basis for evaluating system responses:

System response ratings		
Appropriateness	**Effectiveness rating**	**Efficiency rating**
Possible rating • Appropriate • Partially appropriate • Not appropriate	Possible rating • Effective • Partially effective • Likely to be effective • Not effective	Possible rating • Efficient • Mixed efficiency • Not efficient • Not known

Contextual Background

This section covers a brief background on developments related to the various aspects of schooling in Oman, and the context within which the evaluation of each aspect takes place. Each subsection highlights what the system is trying to achieve in relation to the aspect specified.

Oman's Educational Development

The origins of the present school system in Oman are relatively recent. Prior to 1970 Oman's formal school system consisted of only three primary schools and 30 male teachers catering for the education of 900 boys. But with His Majesty Sultan Qaboos bin Said's ascension in 1970, this situation changed significantly. The new government began the process of developing a nation-wide public education system to cater to all sections of society.

The Ministry, established in 1970, was responsible for all education matters in the Sultanate and in that same year a free 12-year 'General Education' school system was established and offered to all who wished it. Early priorities were decisions on the structure and curriculum of the new public school system. Key challenges were to ensure the availability of the infrastructure and teaching staff required by the rapidly expanding school system. Schooling was divided into 3 stages: elementary (Grades 1-6); preparatory (Grades 7-9); and secondary (Grades 10-12). An intensive programme was undertaken to build new schools, and by 1975 there were over 200 schools in which nearly 56,000 students were enrolled; 15% of them girls.

The Ministry determined curricula, subject syllabi and student textbooks, which in the early years were purchased from other Arab countries. The provision of a teaching force was also heavily dependent on teachers from other Arab states, and for the teaching of English, staff were hired from UK, India and Southern Asia. A very small proportion of teachers were Omani, usually untrained and with relatively low education levels. Many expatriate teachers were also minimally qualified. In 1975 two teacher training institutes were established, one for males and one for females. By 1995 almost half a million students were being taught in over 950 schools. A policy to Omanise the teaching work force was introduced in the 1980s and by 1995 about 30% of the teachers were Omani.

In 1994, the responsibilities for the education system were split, with the newly created Ministry of Higher Education taking responsibility for Higher Education. More significantly, 1995 marked a shift from *quantitative expansion to qualitative improvement* of education. This shift signalled the beginning of a period of educational reform in accord with a vision for the sustainable economic development of the country, seen as contingent on human resource development with students needing to be well prepared for *'further and higher education, labour market and modern life generally'* (Ministry 2004a; p 27).

Many of the reforms adopted in the ensuing years were consistent with the global agenda for education promoted by the World Bank, UNESCO and other development agencies to countries where education development was in transition. Most of the activities associated with the reforms were externally designed and heavily supported by international 'experts' from Britain and North America. It is important to note that the implementation of the reforms has been context-specific. By 2013, the number of schools in Oman had grown to 1,042 with over 53,000 teachers; 89% of them Omani. They were providing education to 514,000 (approx.) students. Although the reforms resulted in considerable achievements, there remained concerns about the quality of outcomes relating to student learning and other key aspects of schooling in Oman.

The first five-year strategic development plan for education was implemented between 1976 and 1980. It followed the 'quantitative expansion' phase of schooling during the period 1970-1975. Subsequently, the development plan has been renewed every five years. Initially the five-year plans were drawn up

by the Development Council and more recently by the Ministry of Education. Currently the Ministry is implementing its eighth consecutive strategic development plan. Oman is considered to be currently in a 'qualitative improvement' phase of development.

Oman's Educational Philosophy

Oman's system of education is embedded in a well-articulated set of philosophical principles. The first documented *Philosophy of Education*, published in 1978, was based on three pillars: the Islamic faith; the traditions, customs and historical heritage of Omani society; the comprehensive development plans of the country (Ministry of Education 2004c, p,13). The interrelationship between education, culture and development, therefore, has been long recognised within Omani education.

Given the rapid expansion and reform of education over the subsequent 25 years, the need to revisit its philosophical foundations gave rise to a further philosophy of education document, published in 2004. It aimed *'to serve as an ideational reference to all involved in the education process and to guide them in their ongoing efforts of reform and development'* (2004c p.19).

The principles and values of the three pillars noted above were restated. Also stated was that the features and characteristics of Omani society serve as a starting point for the Omani philosophy of education: that Oman is an Arab Islamic country, a socially cohesive population with a distinctive culture history and with a sense of 'belongingness' to the Gulf region, the Arab and international communities (2004c p.24). So while the national education system is acknowledged as firmly rooted in Omani socio-cultural relationships, educational development for Oman is also seen as needing strong regional and international interactions.

These philosophical principles have been put into practical effect through the Sultan's role as a founding member of the Gulf Co-operation Council (in 1981), and the extent to which Oman's education system has participated in educational events and activities emanating from the GCC Education Bureau in the years since. Since the early 1970s Oman has had very close connections to UNESCO, UNDP, UNICEF and other international development agencies involved in education. At the global level, the Ministry of Education has put much effort into its commitments to meet the Education For All (EFA) targets set in 1990 at Jomtien and strengthened at Dakar in 2000 (UNESCO 2000), and, also since 2000, the Millennium Development Goals (MDGs) to be met by 2015 (Ministry of Education 2009; UNESCO 2005).

Also documented in the 2004 philosophy of education statement was the recognition that the increasing 'modernisation' of Omani society, and the need for understandings and skills to deal with modern technology, are *'adding new dimensions to the education endeavour'* (Ministry of Education 2004c p.29).

Since the change in educational imperative in the late 1990s, to one more responsive to the future needs of Omani society, greater Ministry of Education effort has been devoted to improving the quality and relevance of education. In recent years, a large number of major reforms have been initiated within the education sector to prepare Omanis for the challenges of competing in an increasingly globalised world (Ministry 2006, p. 20; cf UNESCO 2005).

Thus, as well as serving to uphold and strengthen the cultural traditions important to Omani society and the promotion of social cohesion (Ministry of Education 2009), education is also expected to provide an important route to modernisation through the development of human capital. Sultan Qaboos's vision for a high quality school system that all young Omanis can access and participate effectively within is reported to be very much driven by his wish for Oman to utilise its natural and human resources to develop a modern economy.

Concluding comment. The need to have an understanding of the underpinnings of Oman's educational development and the philosophy in which the school system is embedded was an essential part of the Consortium's approach to the Evaluation Project. It was recognised that an evaluation cannot be context-free. Also recognised was the extent to which the Oman education reform process has reflected the global, and especially UNESCO-driven, views on the development of a quality education system, albeit reshaped for the Omani context. The synergy between Oman's educational philosophy and education development goals and the international community's current thinking on an education development agenda for post-2015, can be seen in the following summary drawn from recent UNESCO/UNICEF documents on why quality education is essential to wider development. Quality education is regarded as:

- A fundamental human right from which no young person should be excluded.
- A life-long process which plays a vital role in improving the quality of life for all.
- A key factor in economic, social and cultural development.
- The source of social capital and social cohesion through relationships between the individual, community and nation.
- The bedrock of sustainable development, a key contributor towards its economic and environmental dimensions.
- The underpinning of peace and security for resilient and stable societies (UNESCO 2013; UNICEF & UNESCO 2013).

Aspect 1: Student learning

In 1974, Article 12 and 17 of the 'Basic Statute of the State' captured His Majesty Sultan Qaboos' announcement that all children should have the opportunity to study. That basic right of all students to learn underpinned the rapid supply-driven developments of the next two decades to establish schools across Oman and to engage students in those schools. A subsequent update to the statute in 2008 made sure that a basic right to learn was explicit for students with special education needs. As the new millennium commenced, leaders of Oman's education system had every reason to celebrate the successes of their early establishment work. However, they quickly shifted from outputs-focused supply to the challenges associated with outcomes-focused quality of the foundation system they had established.

At the forefront of an outcomes-focused schooling system is student learning. Oman leaders have thought about this aspect of the education system in terms of how to:

- Monitor and improve student learning.
- Put in place academic support systems.
- Create an inclusive environment whereby diverse learning needs of all students are supported, and
- Maximise learning contact time to achieve success of all students.

The Ministry of Education has developed several departments to deal with these matters including:

- Examination and Test Administration Department.
- Special Education Department.
- Student Achievement Department.

Baseline systems to monitor and improve student learning grew out of decisions to combine continuous assessment results with end-of-semester examinations from Grade 5 through to Grade 12. The combination of results provides an overall judgement of student performance. The overall judgement has been heavily influenced by the continuous assessment results, which tend to give a much more appreciative view of student performance than end-of-semester examination results.

Oman's low results in the international TIMSS and PIRLS survey programmes coupled with extremely low numbers of students adequately qualified to enter university directly after school compared to the high marks assigned to students under the national assessment system suggests there is a tendency to inflate the assessment marks allocated to students in the existing national student performance systems.

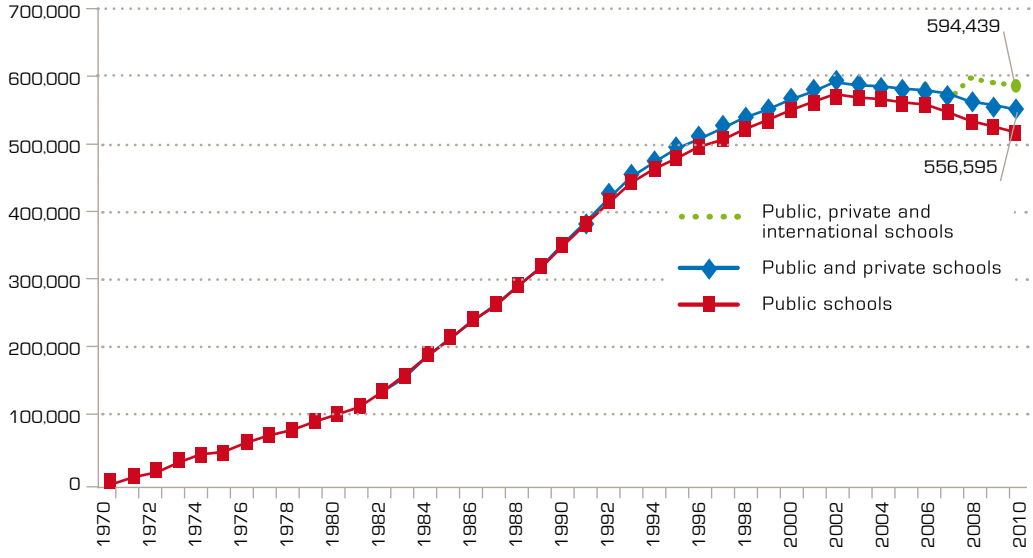
Chapter 7: Student Learning, covers the issue of inflation in student performance results and deals with two other key issues in inclusive education and learning contact time respectively:

- Training teachers and specialist staff to cater for the diverse needs of Oman students.
- Utilising available data to understand how to think about student learning contact time in a 21st century learning environment.

Aspect 2: Teachers

As recently as 1970, Oman had only three male students schools with 30 teachers educating 909 students. At that time nearly 66% of Oman's adults were illiterate (Ministry 2006, p.19). Yet within forty years the Oman public schooling sector employed about 52,000 teachers and 9,000 school technical and administrative staff who worked in approximately 19,000 classes spread across 1,042 schools.

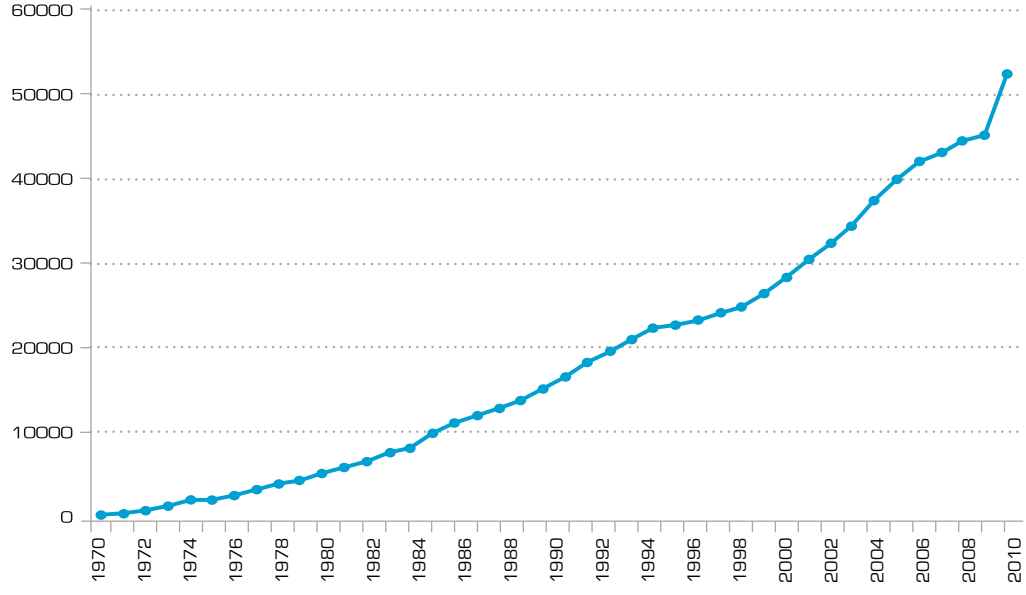
Graph 6.1 **Number of Public School Student Enrollments (Grades 1–12) 1970-2010**



Source: MOE Statistical Department

Notes: Data for international schools are only available for 2008/09

Graph 6.2 **Teacher Growth from 1970-2010**



By the early 2000s, it was evident that Oman was on track to achieving both the UNESCO Education for All (EFA) goals and the education-related Millennium Development Goals (MDGs). At this stage the focus of the Ministry was redirected to the provision of a quality education sector. The rapid Omanisation of the teaching workforce (2004/2005- 80.3%; 2010/2011- 89%) (Ministry 2011b, p. 86) has been one of the most noticeable features of the reform of the teaching workforce in recent years. The previous dependency on expatriate teachers had led to issues with high turnover rates of staff and a resulting lack of continuity. These issues were seen as having a negative impact on the Ministry's efforts to develop and deliver a quality education system (Ministry, 2006, p.87).

During the rapid 'quantitative expansion' phase of schooling in Oman in the 1980s and 1990s, teachers prepared for their work in Teachers Colleges. However, by the mid-2000s Oman was faced with a general over-supply of teachers and many of the Teachers Colleges were converted into applied technical colleges.

The system remains dependent on non-Omani teachers to fill key subject gaps such as fine arts, music, male biology, boys English teaching, Physical Education and sports. Some 4,868 teachers (approximately 10%) are classified as expatriate in the 2010/2011 statistics (Ministry 2011b, p. 87). Difficulties in staffing means some teachers are required to teach classes outside their area of specialisation. Also the demand for teaching positions varies according to geographical location. The current allocation process of teachers to geographical locations has produced a reasonably even distribution of teachers at a regional level. However, the current transfer system tends to assign more inexperienced teachers to the more remote regions.

Chapter 8: Teachers, outlines the current state of teaching in Oman and focuses on two interesting trends that systems leaders might want to think about for the future well-being of the teaching workforce. Those trends centre in on maximising the potential of the teacher workforce to lift student learning and scripting stories about teachers that are both positive and appreciative.

Aspect 3: School Culture

Oman's educational reform programme, with its central goal of improving the quality of education has resulted in an increased focus on improved school performance. The recognition of the importance of the environment within which teaching and learning take place led to the establishment of a number of structures and processes aimed at strengthening the various components of school culture and providing information on how well schools and teachers were doing, and how they could best be developed and supported (Ministry 2004a; p 27).

In 2003, the Educational Supervision Department introduced a series of incremental shifts from school 'inspection' towards 'supervision'. The primary responsibility of the Educational Supervision Department was the successful implementation of the reshaped teaching and learning processes in all schools to enable the achievement of sustainability in the change processes required by the reforms. Specific responsibilities of the Educational Supervision Department included:

- Providing supervisors with all necessary professional support.
- Analysing and following-up all reports from regional supervisors.
- Collating and analysing data on student performance.
- Ensuring teachers were helped to develop themselves professionally.
- Dealing with reported obstacles to successful curriculum delivery speedily and efficiently (Ministry 2006, p.121).

A further Ministry initiative with the aim of encouraging a change in school culture revolved around attempts to *'develop capacity within schools to enable them to be self- critical, to be able to identify their strengths and weaknesses and to take responsibility for their own development'* (Al Balushi & Griffiths 2011, p 122). With the overall aim being 'for schools to work towards the continuous improvement of the whole school' (Ministry 2010 p.63), the contributing structures and activities have been developed and implemented gradually since 1998. In that year the English Office for Standards in Education was commissioned to offer advice on how to plan and carry out school reviews. Based on this advice, the Ministry developed its own proposals for a system of school self-evaluation complemented by occasional external evaluation, with the focus on classroom practice and suitable to the Omani context.

A School Performance Evaluation Programme began in 2003 with the aims of developing national school evaluation criteria and introducing a comprehensive evaluation system to 16 pilot schools. It is reported that by 2011 all schools were involved in undertaking self-evaluation and all school principals, senior teachers and teachers have been trained on a range of skills, tools and strategies for effective school evaluation. The set of criteria guiding the process falls into three main areas:

- The standard of student learning.
- The impact of teaching on learning, and
- The impact of leadership and management on learning (Ministry 2008, p.22-23).

The primary aim of the school self-evaluation process is described as *'to improve schools so that they can attain and maintain high standards of student learning',* and the main objective was to 'generate valuable information for the Ministry and assist it in setting its priorities and targets for further development' (Ministry 2008, p.24; 2010, p.63).

Chapter 9: School Culture, outlines some key issues in relation to school effectiveness and supervision of teachers, moving from routine to adaptive practice and student regulation.

Aspect 4: Curriculum and Assessment

The curriculum in Oman is led and managed by the Ministry of Education. Over the last four decades it has undergone substantial reforms (Lofthouse and Whitehouse, 2012). At the beginning of its expansion phase in the 1970s, Oman relied on curriculum and textbooks imported from neighbouring Arab countries and they were used without any modification. During the 1980s however, experts from those neighbouring countries were engaged to develop a curriculum specific to Oman. Most of the material, however, was derived from the experts' home country curriculum.

The introduction of the Grade 1-10 Basic Education system in 1998-99 (Ministry 2004a, p30) was aimed at changes in the following areas:

- A wider curriculum including more relevant subjects (e.g. IT, Life Skills) with strengthening of core subjects (Mathematics, Science, Arabic and English Language).
- Teaching/learning resources to be less abstract and more meaningful with real-life application and student-centred approaches.
- A wider range of assessment and evaluation instruments and the development of higher thinking test items.

When the Basic Education programme was being developed, the Ministry created a general framework for the curriculum. The guiding principle for the design of the new curriculum was to develop a student-centred curriculum that included relevant knowledge and skills-based content and would lead to raised standards of student learning (Ministry 2007a).

It was agreed that needs of the teaching force were such that a common curriculum with a clearly defined structure was needed with textbooks and teacher guides by subject and grade level. Also agreed, however, was that teachers would be encouraged to go beyond textbooks and make use of differentiated teaching and learning materials provided to cater for a range of learning styles so students would be able *'to learn at their own pace and in their own way within a common framework of objectives'* (Ministry 2008c, p70). Educational aids were to be developed for integration into the Basic Education curriculum. For example, science, mathematics and English language kits for Grades 1-10.

The 8th Five Year Strategic Plan (2011-2015) outlines a programme of work to develop the areas of curriculum and assessment. For curriculum, the goal is *'to develop the study plan and curricula to ensure producing educational graduates who meet the requirements of development and labour market'*. The assessment goal is to *'increase the efficiency of the student performance evaluation and the level of their skills in order to meet the quality of work'* and includes attention to both national and international assessment of Omani students as well as improving technical aspects of student evaluation.

Chapter 10, Curriculum and Assessment, considers the curriculum in relation to content and delivery, and discusses topics such as extra-curricular activities and school study plans. It also discusses standards set to determine achievement and systems of assessment. The alignment of pedagogy, curriculum and practice is considered and issues are discussed in terms of possibilities for future development.

Aspect 5: Relevance

A well-developed education system is upheld globally as one of the necessary conditions for advancing the quality of life, developing active citizens for society and ensuring future prepared participants in the countries economic wellbeing. A secondary education system that is responsive to social needs and relevant to the country's growing formal economy is, therefore, essential to Oman's national development. Increasingly Oman's compulsory education system is becoming a central policy focus within this development context.

The mid 1990s shift in Oman's education emphasis, from quantitative expansion to qualitative improvement of education, signalled the beginning of a period of educational reform in accord with a vision for the sustainable economic development of the country.

In the early 2000s, the Ministry of Education began the process of developing a two-year Post Basic Education programme for 16-18 year olds, to synchronise with the approach of the Basic Education programme. The vision was for all young Omanis to complete 12 years schooling that would prepare them to meet international academic performance standards and national expectations (CfBT, 2003; Ministry 2008a). It was designed to:

- Deliver a variety of curriculum choices to enable entry into higher education/training or directly into the workforce (with basic work-related skills).
- Ground all students in Maths, Science, and ICT.
- Ensure excellent skills in written/spoken Arabic and sufficient skills in English.
- Enable acquisition by all students of skills in critical thinking, problem solving, creativity, independent learning, innovation, and communication.

The aim of the Post Basic reform was to present students with multiple paths based on their different backgrounds and abilities, and the different skills and knowledge required by their future destinations plans. The core electives were aimed at providing the skills seen as needed for preparation for continued education and/or employment.

There are concerns from stakeholders that the current graduates of the Oman G1–12 education system do not have these necessary skills. These concerns are evident in:

- The top-down pressure for increased numbers of students to meet the entry requirements for an expanding higher education system.
- An expanding higher education system to manage the pressure of increased numbers of students requiring further education, and
- Demands for school graduates to have a wider range of, and greater strengths in, cognitive skills required for entry into the labour market.

Chapter 11: Relevance considers the progress made in enhancing Post Basic Education schooling opportunities in Oman during past decades, and provides an overview of the higher education and labour market environment's school leavers are now entering. The chapter highlights stakeholder concerns about the current qualities of secondary education graduates and the ability of the secondary education system to meet national development needs. Emphasis is given to discussion of the relevance of education and training in the development on entrepreneurship and life skills.

Aspect 6: Infrastructure

The lack of a public education system in Oman, prior to 1970, meant that there was no physical infrastructure initially with which to work. The government was required to commit itself to a significant investment in building schools. Therefore, the first twenty-five years of development were characterised by a rapid expansion of educational services. During most of this period the main priority for the Ministry was to increase the quantity of, and access to, its education services as quickly as possible. From the initial three schools in 1970, some 953 schools had opened by 1995. This achievement was recognised by an early World Bank Report (2001) as an effort unparalleled by any other country (Ministry 2006, p.28).

The rapid expansion of school provision continued during the period 1995-2004 as the Ministry increased the number of schools by a further 85. With an overall shift of focus from 'quantitative expansion' to 'qualitative improvement' during this period the Ministry's motivation for providing new schools was to reduce class sizes and eradicate "double-shift schools". This required significant financial commitment in capital expenditure for school construction (Ministry 2006, p. 133).

The majority of schools in Oman are very similar in build, appearance and layout. Building products, paint colour schemes, and the structural layout of buildings and school property more generally (e.g., fences, gates, car park areas etc.) are highly consistent across the country. This reflects the specific geographical and climatic nature of Oman, the particular Omani building tradition that exists, and the highly uniform nature of curriculum requirements.

Since the beginning of this century building of schools in Oman has tended to follow the Basic Education model. This requires the building of three main types of schools:

- Cycle 1 (Grades 1-4);
- Cycle 2 (Grades 5-10); and
- Post Basic Education (Grades 11-12) (since 2007).

While some exceptions to this framework exist most students will transition between these three school structures. As a rule Cycle 1 schools cater for both male and female students (with only female staff) taught together in the same class. Cycle 2 and Post Basic Education schools, however, are all single-sex schools catering for either boys (male staff) or girls (female staff). The nature of the clientele of the schools, student age and gender, as well as academic requirements, determines the building codes and equipment requirements for each type of school structure.

As the Sultanate works towards achieving its goal of "Education for All" the requirement for additional building resourcing will continue. Currently the aim to include all students with a range of special needs requirements will require funding to ensure that all school facilities are accessible to all students. The 8th Strategic Development Plan (2011-2015) has made a commitment to the building of school gymnasiums and improving the quality of the IT infrastructure within schools and across the whole Ministry.

Oman is now also facing the need to recondition many of the schools that had been built in the first building expansion period of 1970-1980. These early school buildings are now more than forty years old and require extensive renovation or complete rebuilding. During each subsequent five-year period a large number of schools will need to be reconditioned or retired.

Chapter 12 Infrastructure considers the progress with the current building development programme and the development of new building designs for student centred learning, as well as considering the development of ICT in schools.

CHAPTER 7

STUDENT LEARNING

The Terms of Reference for the Ministry of Education Evaluation of the Education System (Grades 1-12) set out the following components for the evaluation of the Student Learning aspect:

1. **Student performance:** Students' performance, particularly in reading, writing, numeracy and science, for example, analysing students' results in national and international tests (Arabic, English, mathematics and science), to compare attainment of Omani students with students internationally, and to provide recommendations based on the analysis.
2. **Academic support:** Academic support systems (including Attainment Follow-up Committees and electronic systems) for students who under-achieve on the learning objectives and to promote teaching and learning that recognises individual differences among students.
3. **Inclusive education:** Effectiveness of delivery and support offered to teachers to include learners with special education needs into schools with the aim of growing an environment of inclusiveness.
4. **Learning contact time:** Officially stipulated and actual length of class periods, school day and year and appropriateness of the schools' daily plan (e.g. number of breaks) in comparison with international practice.

Summary

The building blocks required to generate the basic level of student learning are well established and recognised by the Ministry of Education. System leaders also know and are anticipating the challenges ahead to engage and lift the performance of all Omani students to international standards. Self-determination and careful consideration, by these leaders, toward creating a comprehensive Oman solution for Omani students, is likely to avoid the trap to implement quick fix solutions that have plagued many other countries.

The Consortium considers that the following are priority development areas:

1. The imminent work of the proposed Assessment Centre within the Ministry of Education to deliver a robust assessment and qualifications system.
2. Analysis and use of non-inflated student performance and engagement data to adjust teaching, learning, leadership and supervision practices. Data systems are well developed within the Ministry but significantly under utilised to generate meaningful information and discussions on learning.
3. A comprehensive investment in training teachers and special education staff to close the gap between the Ministry commitment to inclusive education and educators in the schools and communities without the pre-requisite skills and knowledge to enact this vision.
4. Improving learning contact time to increase the amount of time students invest in disciplined learning inside the classroom. The Ministry also needs to encourage teachers to start thinking about how to blend disciplined classroom learning with more informal and authentic learning that students engage in with friends, families and in their communities, as they explore their environment and the wider world. Blending these two forms of learning will engage students in learning. Keeping them separate does the opposite.

7.1 Student Performance Component

The Terms of reference for this component were to evaluate the systems-level responses to student performance, particularly in reading, writing, numeracy and science, in relation to national and international results.

7.1.1 How the system works

Oman's education system has a multi-levelled approach to track student performance.

Oman's education system has a multi-levelled approach to track student performance. There is a within-school programme of continuous assessment and examinations, some collation of results within governorates, a national tracking system and involvement in two international sample programmes; Trends in International Maths and Science Study (TIMSS) and Progress in International Reading Literacy (PIRLS).

Ministerial Decree No. 104 (Ministry of Education, 2012a) set up the Student Achievement Follow-up Committee to develop systems for student performance. The Main Committee is responsible for tracking and analysing student performance results. It is also responsible for several other matters including an overview of remedial plans and promoting improvement initiatives to lift student performance.

Sub-committees in all Governorates are responsible for implementing the plans of the Main Committee by:

- Undertaking quarterly analyses.
- Activating the Parents Council.
- Undertaking stakeholder management.
- Visiting and developing action plans for schools with low student achievement.
- Ensuring schools comply with regulations and reviewing the work of supervisors.

The Ministry of Education has an Examination and Test Administration Department to activate the strategies of the Main Committee through the Ministry of Education (Ministry of Education e-Portal, 2013). Within that Department is an Analysis and Studies Section, set up to collate and analyse student performance results in ways that are useful to the Minister of Education and relevant committees and departments within the Ministry of Education. The Analysis and Studies Section is also a means of identifying schools with the lowest student performance results to enable the Ministry and Governorates to support them.

In Oman, there are four subcomponents to generating student performance results:

- Continuous assessment results for Grade 1-4 students.
- A combination of continuous assessment and end-of-semester examinations to generate overall Grade level results in years 5-12.
- Participation in international studies, surveys including TIMSS and PIRLS.
- Primary analyses in schools of the student performance results.

Continuous assessment in Grades 1-4

Students in Grades 1-4 progress through grade levels in line with social promotion in early years. Continuous assessment methodology has been used since 1998/99 to monitor and improve student performance as students move through their first four grade levels in school (Ministry of Education, 2012b). The methodology is a systematic approach to assist teachers in making realistic judgements about student performance in each subject area at the end of each grade level. Accumulative results from a comprehensive set of continuous assessment tools, such as oral presentations, projects and shorts tests, coupled with evaluative information collated in student-led portfolios, provides evidence for those judgements. Two judgements are made; an overall score out of 100 and a grade from A-E (A being 90-100% and E relates to 49% or less).

Continuous assessment plus examinations for Grades 5-12

Determination of student performance in Grades 5-12 is calculated by an accumulation of results over the academic year. The accumulation starts in Semester 1. Results from continuous assessments and the end-of-first-semester-examination in January are collated into an overall result out of 100 for each student in each subject area. Overall results below 50 are rated 'fail' and results at or above 50 are rated 'pass'. (The final exams of both semester have equal weight.)

International benchmarking

Oman commenced international benchmarking around student performance by joining the Trends in International Mathematics and Science Study (TIMSS) (Grade 8 students in 2007 and grade 4 & 8 students in 2011), and the PIRLS (Grade 4 students in 2011). At a strategic level, participation in these studies was part of the existing development and modernisation process that had been in place since the introduction of Basic Education system in 1997 (Minister of Education, 2007). Joining TIMSS and PIRLS provided Oman with an opportunity to receive credible and quality feedback on student performance as a measure of systems performance. It also provided an in-road for Oman officials to develop their student performance metrics and moderation processes with international colleagues.

Ministry of Education Director General of Education Evaluation reiterated that the value in joining the TIMSS and PIRLS programmes was learning from the results and acting on them: "Results should not disappoint but rather focus our efforts" (Director General of Education Evaluation, Launch of 2011 TIMSS & PIRLS Analysis, March 2013). Any comparisons should be against similar countries. Emphasis for improvement was on rallying schools and communities to raise achievement, growing capability of teachers to respond positively and lifting low performing governorates. The key message here is that Ministry action is important but not sufficient to lift overall student performance. Everyone has to help.

Primary analysis of student performance results

Student performance data is being analysed at every level in the Oman education system; in the schools, the governorates and within the Ministry of Education. It is being analysed more in some parts of the system than others, but a positive sign is that all levels are developing systems to analyse student performance data.

First and foremost, student performance data is analysed in schools. Teacher analyses are in the form of reports to parents and students. Parents and students receive a descriptive report at the end of each of Semester 1 and 2 and an overall student performance report at the end of the year. School administrators also submit the student performance results into the e-portal to report results to the Ministry of Education. This act bypasses the governorates. More information about the governorates' analysis of student performance data is presented further into this section description.

Once the data are entered into the e-portal, they are collated by the Analysis and Studies Section of the Examination and Test Administration Department in the Ministry of Education. Considerable technical and analytic capability among staff within that section means they are able to produce reports large and small about any aspect of student performance for any level in the system. The following set of tables exemplify the types of student performance information that can be generated about student performance at different levels in the system. Table 7.1 provides a comparison of the overall average results for Grade 8 students in core subjects across the three states of the Al Buraimi Governorate in 2012/13. The results are encouraging overall although it must be noted that the mathematics and science results in Governorate assessments are higher than those achieved by Omani students in the 2007 and 2011 TIMSS examinations. These regional-level results place the students in the middle section of student performance ratings, yet in the TIMSS results, the Grade 8 students were in the lower section.

Table 7.1: Grade 8 Comparison of Average Marks for Subjects, Second Semester, Al Buraimi Governorate, 2012/2013

State	Islamic %	Social Studies %	Mathematics %	Science %	English %	Arabic %
Al Buraimi	77.05	76.54	68.48	67.05	66.40	71.39
Alsininah	86.00	80.40	56.40	67.40	64.40	75.20
Muhadha	74.51	68.71	66.57	64.99	61.80	72.69

Table 7.2 provides a more detailed breakdown of student performance in core subjects in one Governorate, Al Batinah North. In this case, the breakdown shows summative test results, continuous assessment scores and overall results by core subjects for Year 10 students. Continuous assessment results (with the exception of Islamic studies) are all significantly higher than the summative test scores. Total scores are all above the 50 per cent pass mark.

Table 7.2: Grade 10 Students, Al Batinah Grade Averages, 2012/2013

Subject Name	Summative Test %	Continuous assessment %	Total Score %
Islamic	75.10	82.85	78.43
Social Studies	68.10	80.61	73.59
Mathematics	50.51	77.06	61.11
Science	55.54	77.29	64.23
English	48.06	80.42	60.95
Arabic	64.55	77.89	69.87

Table 7.3 provides a much more detailed spreadsheet of student performance information for one school. It shows average scores and grades A to F for Grade 5 students in core subjects. Once again, the continuous assessment results are higher than summative test scores.

Table 7.3: Grade 5 students, Asaad Bin Zurarah School, Almusanana, Al Batinah South, 2012/2013

Subject	No of Students	Continuos Assessment Score	Summative Test	Average total	Pass Count	Average Pass	Failure Count	Average Fail	A	Average	B	Average	C	Average	D	Average	F	Average
Islamic	259	76.60	54.21	67.64	198	76.45	61	23.55	52	20.08	58	22.39	40	15.44	48	18.53	61	23.55
Arabic	259	67.21	46.31	58.80	162	62.55	97	37.45	35	13.51	27	10.42	55	21.24	45	17.37	97	37.45
English	259	75.38	38.22	60.52	235	90.74	24	9.27	15	5.79	10	3.86	42	16.21	168	64.86	24	9.26
Maths	259	74.18	40.82	60.84	199	76.83	60	23.17	18	6.95	28	10.81	49	18.91	104	40.15	60	23.16
Science	259	63.76	46.76	56.96	173	66.80	86	33.2	15	5.79	29	11.20	53	20.46	76	29.34	86	33.2
Social Studies	259	66.80	54.43	61.85	190	73.36	69	26.64	20	7.72	35	13.51	66	25.48	69	26.64	69	26.64

The benefits of high analytic capability in the Examination and Test Administration Department are twofold. Senior officials, including the Education Evaluation Director General and various policy and Ministry committees and the Minister of Education, can now receive fit-for-purpose reports in a timely manner.

In addition, student performance outcome reports can be delivered to the governorates. Accordingly, analyses are being developed for two purposes:

- In 2012, the Analysis and Studies section of the Department started to train the examination and student affairs officers in the governorates to analyse student performance data for the dual

purpose of learning how to analyse results for Grades 5-11 students and to send their analyses to the Ministry of Education. Note that 12th Grade analysis was completed by the Ministry. The examination and student affairs officers in the governorates can access the e-portal data for their schools to conduct analyses of their own. The officials in the Studies and Analysis section of the Ministry provide national analysis of data.

- The Analysis and Studies section is also a means of identifying schools with the lowest student performance results to enable the Ministry and Governorates to support them.

7.1.2 System Awareness of Issues and Challenges

As in most other countries around the world, issues have been noted in relation to student performance in Oman. One issue raised involves low overall results and this is compounded by a related and equally important problem of inflation in the continous assessment, which is discussed further in Academic Support. The low results, coupled with the inflation problem, make system improvement particularly challenging. Fortunately, the current positive and constructive response to the low results can be used as leverage to address the inflation issue.

Some Omani internal and external stakeholders have questioned the applicability in the Oman context of international assessment items that provide low ratings of student performance in Oman. They question whether the results match the Oman curriculum. However, the Consortium notes that Oman's experience in the international studies mirrors their experience with school graduates, i.e. a very low percent of Oman school graduates are able to enter directly into stage 1 Oman university courses without completing six month to two year foundation programmes. Critique is an important part of any reform movement that makes a difference. In this instance it is better to become part of a critical international community that interrogates rich data from a range of countries and looks for positive next steps for improvement.

Awareness of the issue

Systems leaders are **fully aware** of the low results in mathematics, science and Arabic on the international and national stage and have made considerable efforts within existing communications to spread the awareness into governorates, schools and communities.

Fully aware	Where systems leaders are fully aware of issues, they are well known across Oman. The matter is noted in relevant documents and is recognised across the education system from the Minister of Education through to the Under Secretaries, Director Generals, Ministry staff, schools and communities.

System leaders' identification and awareness of the low international and national student performance standings is considerable. This high level of awareness is evident in both oral discussions and written statements.

In terms of dialogue, the levels of student performance appear in both regular day-to-day work discussions as well as on centre stage in seminars and conferences. Examples of the results being considered on an everyday basis can be heard in the dialogue between the Oman team members in the Evaluation Project Team and school administrators and teachers. They referred constantly to the TIMSS and PIRLS results throughout the duration of the project and also inside Phase 2 and 3 school visits. An example of the international results being shared with prominent audiences was seen at a conference held at the Albustan Palace Hotel, Muscat, in March 2013. The conference was attended by stakeholders from inside and outside the Ministry of Education. For instance, there were representatives from Sultan Qaboos University, the Al Shura and State Councils, Ministry of Higher Education, the Education Council and the Research Council in Oman. Discussion at that gathering, coupled with on-going dialogue between Ministry and school staff, provided a clear indication of the intent to deprivatise the international results.

There are both hard copies of national reports about the results signed off by the Director General of Education Evaluation, as well as easy access to the results on internet http://timss.bc.edu/:

- Ministry of Education (2007) *Oman National Report (TIMSS 2007)*.
  Muscat: Directorate General of Educational Evaluation.
- Ministry of Education (2011) *Oman National Report (TIMSS Grade 8, 2011)*.
  Muscat: Directorate General of Education Evaluation.
- Ministry of Education (2011), *Oman National Report (TIMSS Grade 4, 2011)*.
  Muscat: Director General of Education Evaluation.
- Ministry of Education (2011), *Oman National Report (PIRLS, 2011)*.
  Muscat: Director General of Education Evaluation.

A summary of findings from those national reports is outlined below.

Entry point results in 2007 for Oman in TIMSS were low in both international standings and distance below TIMSS scale score average of 500. In mathematics, Oman Grade 8 students ranked 41th out of 48 countries and the average scale score of 372 (standard error of 3.4) was significantly lower than the TIMSS scale average. Science results were better than mathematics. Oman ranked 36th out of 48 countries and had a scale score average of 423 (standard error of 3.0). These results were low on the broad international stage, but Oman was second to Bahrain in GCC rankings.

In 2011, Oman student performance results in TIMSS and PIRLS remained low. TIMSS revealed a drop in student performance in mathematics. Oman's mathematics standing was 41th out of 42 countries participating and a grade score average of 366 (2.8). In science, Oman was 36th out of 42 countries with a grade score average of 420 (3.2), which was similar to the 2007 result. Year 4 literacy (Arabic) results in PIRLS were also extremely low. Oman was 44th out of 45 countries participating and with a grade score average of 391 (2.8).

7.1.3 System Responses

Low student performance against student performance benchmarks		
Appropriateness	Effectiveness rating	Efficiency rating
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

Response rating; appropriate response

Systems-responses to the low student performance international rankings are rated as appropriate. The main reason for that rating is because systems leaders are deprivatising the results without creating a sense of country-wide failure. At the macro systems level, the Director General, Education Evaluation, delivered a clear message to keep the results in perspective in relation to the overall development of countries in the GCC. It is understandable to have low results given that the group of GCC countries is only in the early stages of developing their formal school-based education systems. It is a matter of being compared with like countries and responding with realistic next steps with the intention that those next steps will accelerate progress.

Effectiveness rating; Effective

A rating of effective is given because there appears to be a preference at the strategic level of the system to move from a disordered project environment to more careful consideration of next steps. If high student performance is considered to be the overall goal of the Oman education system and all efforts to build a high quality system are considered contributions to reach that goal, then systems leaders have a myriad of options to contemplate. There have been multiple projects commissioned, reports written and recommendations made to consider how best to grow a high quality system (Ministry of Education, 2011). Advice is now being given to map and synthesise the recommendations to identify priority areas for development and the most appropriate steps necessary for implementation. That advice in itself is a sign of thinking about effectiveness rather than charging ahead with more of the same.

There are three clear signs of a change in direction.

The first clear sign was to join the international community analysing TIMSS and PIRLS trends globally. Involvement of that nature tends to curb quick-fix solutions. Oman officials are now an integral part of a highly skilled and knowledgeable international community tracking student performance trends and attempting to make appropriate systems changes in their respective countries. A positive consequence of this involvement is that Oman systems leaders can now delve deeply into specific aspects of the overall trends that are relevant to their student population. For instance, Oman is currently involved in an international investigation to see if there is a relationship between the low results in TIMSS and competence in Arabic reading comprehension. The Ministry of Education Director General of Education Evaluation is the National Research Council research co-ordinator for both studies. The question at hand is whether or not Oman students:

- Struggle to answer the maths and science questions because they do not understand those questions, or
- Struggle to read the questions in the time allocated to complete the test, especially the extended response items.

Studies of this nature are critical to move from a project environment into strategising around important themes in teaching and learning.

The second clear sign is the decision to establish a new assessment infrastructure within the Ministry of Education. The aim is to develop an Assessment Centre that can deliver a robust assessment and qualifications system which is valued and respected both nationally and internationally.

The third clear sign of a change in track was the decision to put in place an Evaluation Project that would assist systems leader to change track. This evidential report and the implementation plan sitting over the top of it are intended as a way to support recent advice about mapping the current situation, identifying a set of manageable improvement priorities and forming a motivated coalition among the Ministry, governorates and schools to deliver on those priorities.

Efficiency rating – mixed efficiency

The efficiency rating reflected a mixed efficiency. There appears to be a systemic approach to the distribution of the international findings but there is scope to extend the systems of sense-making required to understand fully the implications of the findings and make appropriate changes in and around schools and communities and with the governorates.

The national reports have been distributed to schools and are available online. Additionally, TIMSS and PIRLS questions have been disseminated to teachers and administrators to support them to understand the value of a mix of rote and problem solving questions in the overall continuous assessment and examination programme. It would appear that the dissemination approach is more of a hand-over encounter than a learning encounter. Administrators and teachers have received the information and questions but seem to be left on their own to make sense of it and formulate improvement strategies. Senior teachers have been trained to write similar items to TIMSS and have tried to replicate training among teachers in schools.

It would appear that there is some generic sense-making where results are low. For instance, the Consortium found that the dissemination approach is supporting students and teachers to recognise and understand the need to lift results. These systems are also prompting students and teachers to consider the types of changes in teaching and learning that could lift the TIMSS and PIRLS results (Evaluation Project Team Leader, Interview 15/10/2013). These are useful general steps into the use of international data trends but there is room for more nuanced steps relevant to individual schools' needs.

The Evaluation Project Team also noted from the phase 2 diagnostic test exercise around mathematics and science (based on released TIMSS items) that teachers had a good understanding of the reasons students had done well in some areas related to rote learning and were less clear about achievement in relation to problem solving. Participant teachers engaged well in those discussions and started to identify relevant issues.

The key point here is that, given the opportunity, teachers seemed to value the sense-making around student performance matters and reported that this should be a regular event in their interactions with the Ministry and governorates.

Conclusion

The Ministry is successfully transferring national and international student performance data into governorates and schools. This distribution of data could be used to generate systematic and widespread learning encounters about the meaning of the results for improvements within and between schools, governorates and the Ministry. There will be considerable systems-wide improvement if those learning conversations link the data trends to goals set for learning, teaching and leadership.

7.2 Academic Support

The Student Performance component concentrated on tracking, reporting and early analyses of results. The evaluation of the Academic Support component follows on to evaluate the extent to which student performance data, as well as related social and emotional data, is interpreted and used for improvement, particularly for students who underachieve. The extent to which that data is used effectively determines the extent of attention to individual differences among students.

7.2.1 How the system works

The Oman education system has distributed responsibility for improvement and addressing students' individual differences across multiple departments in the Ministry of Education. This section does not cover curriculum, assessment and teaching as departmental systems-levers for improvement among students struggling to achieve. Those areas are covered in Chapter 9 and 11. This section concentrates on arrangements in relation to Attainment Follow-up Committees and electronic systems to analyse and use student performance data for improvement. These parts of the system sit under the Student Achievement Follow-up Committee. As in the previous component, the Analysis and Studies section within the Examination and Test Administration Department plays a vital role in these developments. There are also links in this component to the Special Education Department and the Student Achievement and Awareness Department, as those Ministry departments attempt to cover off social and emotional issues in relation to catering for the diverse needs of those students struggling at school.

There are four sub components to academic support:

- Foundation support for all students to engage in academic learning
- Early years academic support for students in Grades 1-4
- Grade 5-12 academic support
- Social and emotional supports

Foundation supports for all

Foundation supports for all students suggests that leaders might put in place systems that allow the entire student population to have the opportunity to engage in deep academic learning. In formal education systems in place for longer than in Oman, those aspects can be taken for granted as more and more supports are layered over the top of any foundational supports. These supports relate to equity, access and opportunity. These foundational supports should not be taken for granted as they remain fundamental to academic success as an education system matures.

The Sultanate aims to create a learning environment which addresses learners' diverse expectations and needs and promotes life-long learning

The Sultanate aims to create a learning environment which addresses learners' diverse expectations and needs and promotes life-long learning – regardless of cultural, social background or differences in ability and capacity. Foundation provisions are now in place that can be built on to cater for all students' individual needs (Ministry of Education, 2008c). Provision of an equitable spread of schools

across the country, free education for all including boarding facilities for students from remote areas, the supply of free textbooks, free transportation plus the on-going campaign to raise community awareness of the importance of education are all important pillars for success for all students (Ministry of Education, 2008a, p57).

For those students who are in school but not learning to an expected level, the aim of unified Basic Education structure is to make schooling more meaningful and relevant, and to meet diverse learning needs. These measures have been successful in encouraging regular attendance and improved participation. Programmes aimed at reducing drop-out and repetition rates have led to considerable reduction in both rates of non-participation. The very high 2010 rates for completion of the 10 year Basic Education programme (over 90%), transition to the first year of Post-Basic Education (89%) and completion of the 12-year school system (86%) indicate a commendable level of equity and inclusiveness in Oman's school system (Ministry of Education, 2012a, p149).

Concerns are expressed about the underperformance of boys, but there are fewer concerns about underperformance by girls. Provision of equal educational opportunity for girls quickly became 'one of the most important principles of Oman's educational renaissance' (Ministry of Education, 2004a, p.20). By the end of 1970, 1136 girls were receiving elementary education and four years later girls had progressed to the preparatory and secondary school levels. The achievement since then of almost universal education for girls – in 2009 49% of the total school student population was female – is seen as 'one of the Sultanate's great success stories' (Al Balushi & Griffiths 2013, p110).

Academic support in the early years

Academic support in the early years conveys a nurturing environment.

Beyond reporting to parents regularly, use of continuous assessment judgements in Grades 1-4 are to diagnose weaknesses and strengths in student performance and to inform remedial plans for those students scoring below 50 and receiving an 'E' grade. The assumption held about students performing below 50 in the early years is that they need additional help. Academic support in those early years is typically viewed as an expectation, unlike in later years when that expectation is replaced with an expectation of curriculum completion without help.

Academic support at the transition from Cycle 1 to Cycle 2 appears, therefore, to be an abrupt change from a nurturing environment to considerable responsibility for personal responsibility for academic success.

Grade 5-12 academic support

In the past, social promotion was the norm for Grades 5-12, although an Attainment Committee within each school (the principal and representative senior teachers and parents) had authority to retain students in a grade level for a second year and/or develop appropriate remedial plans. There was no systematic monitoring or moderation of Attainment Committee decision making.

The end result of that past advancement approach was that most students progressed from one grade level to the next despite effort or performance. Academic support in that 'high-comfort zone' environment was non-challenging. There was little need for students to work hard to step up in academic performance each year to progress into the next grade level. A Policy Committee decision in 2012 altered that arrangement by introducing a much more high stakes approach to grade level promotion. A pass-fail arrangement was introduced that meant students with high failure rates had to repeat a second year at a grade level. The more rules based approach removed most of the Attainment Committee's authority. The only decision-making point for the Attainment Committee was to provide a process by which students who repeated a grade level and failed in the second year could advance

to the next grade level. The Attainment Committee can promote those students with a rating called 'succeeded with permissibility'. A remedial plan has to be prepared for students who receive this rating.

The shift from social promotion to pass-fail advancement was introduced as an incentive for Grade 5-12 students to take more care about achieving good academic results. Any thought of automatic rite of passage through all grade levels with their peer group was removed. In terms of academic support, the move was a strong message to the student population that they had to help themselves first and foremost.

Academic progression in 2013 and beyond, therefore, is far more stringent than it was in the past. Pressure to perform mounts over the academic year. All students advance automatically into the second semester of their grade level despite ratings in the first semester. At the end of the second semester, however, advancement into the next grade level is not automatic. Advancement or repeat is dependent on the number of subjects failed in the basic subjects; Islamic, Arabic, English, mathematics, science (integrated science in Grades 5-10 and separated Sciences in Grades11/12; biology, chemistry and physics,) and social studies (geography, history and civic education).

A fail is calculated by combining the first and second semester overall ratings and dividing by two. Average ratings below 50 constitute a fail and those at or above 50 represent a pass. Students who receive fail ratings in more than three basic subjects are required to repeat the grade level for a second year. Students who receive a fail rating in one, two or three subjects are given an opportunity to re-sit those examinations. Students must pass all re-sit examinations, to avoid repeating the grade level for another year. They are given sufficient time to prepare for the re-sits. Grade 5-11 students are given two weeks and Grade 12 students have from June through to August to prepare.

Social and emotional support

Foundation and academic supports from Grade 1-12 do not entirely prevent some students from dropping out of school. Drop-out rates have decreased but interventions remain necessary (Hamed & Hassan, 2012). A study entitled "Enhancement of School Retention in Oman" has been conducted to identify strategies to lift retention rates. It was an UNICEF study run in collaboration with the Ministry of Education and the Health, Social Development and Manpower Ministries. The proposals from the study involve identifying the factors that lead to school drop out and introducing fit-for-purpose mechanisms to counter those factors. A wide range of factors has been identified as contributing to school drop-out and retention in Oman. It is worth listing those factors because collectively they represent what matters for students on the fringes of becoming engaged in academic learning.

Factors identified in the study contributing to school drop-out:

- Within-school culture and environment, curriculum and examination challenges.
- Limited time of school social specialists to deal with complex situations.
- The relationship between parents and the school.
- Relationship between the teacher and the students.
- Family economics and social conditions.
- Psychological, disciplinary and mental capabilities.
- Violence towards children.
- Early marriage.
- Child labour.
- Impact of peers, harassment, drugs, television and technology.

Factors that enhance school retention were identified as:

- Laws about compulsory education to 10th Grade.
- Laws against violence and other abusive acts towards students.
- Awareness campaigns to promote positive ideas and values.
- Including community to create solutions.
- Making schools attractive both in facilities and tools for learning.
- Understanding administrators.
- Peer academic support programmes.
- Supporting social specialists.
- Improvements to curriculum and recreational activities.
- Treating students well in schools.

An analysis of these factors suggests adults surrounding students facing challenging circumstances need to be responsive to their situations as well as adaptive in the ways they cater for their needs. Dropping out tends to occur where responsiveness and adaptivity are not the norm. Consider this example of student ridicule by a teacher:

> "Regarding teaching methods and styles; they are entirely based on pedagogic methods of explanation. The teacher explains the lesson, most of the time, without the use of visual aids and with a high constraint on time due to the length of the curriculum.
>
> (Pg. 18, Hamed & Hassan, 2012).

7.2.2 System Awareness of Issues and Challenges

A key issue to be addressed is inflated within-country student performance results. This issue is given the highest priority because analysing student performance data and related social and emotional data is the primary means by which teaching professionals can start becoming responsive and adaptive to individual student needs. If the student performance data is inflated, individual needs are drawn upwards into an 'average zone'. A lift to the average zone invites routine teaching and that appears to be the norm for many Omani students in mainstream schools.

Linking this point back to the inflation issue, it is possible for most Omani students to 'do the curriculum' because their performance is rated in the average zone to do so.

Addressing the issue of inflation of results pervades all aspects of any academic support strategy. At the top end of the system, for instance, it is likely to affect the Director General of Curriculum Development strategising to create:

- Teacher guides to adapt course content and teaching methodologies that accommodate a wide range of student abilities.
- Research to identify reasons for the poorer performance of males, especially in Arabic and mathematics and to identify those schools and programs that provide success for males.
- Curriculum Evaluation Unit work to address the key issue of low student achievement scores and identify the role of the curriculum in enhancing performance.

The inflation issue is likely to cause those three proposed tasks to become routine exercises. Conversely, if the inflation issue is resolved, those three tasks would have accurate and nuanced student performance information upon which to create high quality teacher guidelines for course adaptations, to understand boys' underachievement in Arabic and mathematics, and to learn how to use the curriculum as a lever for improved overall student performance.

The issue of inflated student performance results comes from the accumulation of the continuous assessment result and the end-of-semester examination result. The continuous assessment result is consistently higher than the examination result. In turn, the overall in-country result is much higher than TIMSS and PIRLS ratings.

Systems leaders have **some awareness** that the inflation problem is masking the need for more challenging academic support.

Some awareness	The issue of assessment mark inflation is not referred to regularly in documents and only parts of the system appear to be aware of the potential for significant systems improvement if it is addressed.

A rating of 'some awareness' is made because plans are generally implicit in addressing the inflation problem. A comprehensive set of strategies to address the overall culture of inflation appears a long way off. That longer term view of tackling the problem suggests that systems leaders are either not fully cognisant that they can do some things immediately or they are aware that they can act now but would prefer to wait for formal planned responses to unfold over time.

7.2.3 System Responses

System response ratings		
Appropriateness	Effectiveness rating	Efficiency rating
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

Response rating; partially appropriate

The reason for assigning the partially appropriate rating is that the inflation issue is not being tackled directly. Instead, it appears that the response to this matter is to develop top-down data management infrastructure that may or may not address the inflation issue. Lateral mechanisms, such as collegial activities, collaborative and networks, could be instituted to create demand among students, their families and the schools to identify inflation as an issue and take responsibility for addressing it. Top-down mechanisms instil a sense of 'have to' change but lateral mechanisms cause people to 'want to' change. Working within a system driven in the past by decrees, does not preclude lateral mechanisms for the future. Decree and lateral-related developments can sit side by side. In the case of the inflation issue, however, there does not appear to be any strong 'have to' or 'want to' calls for change.

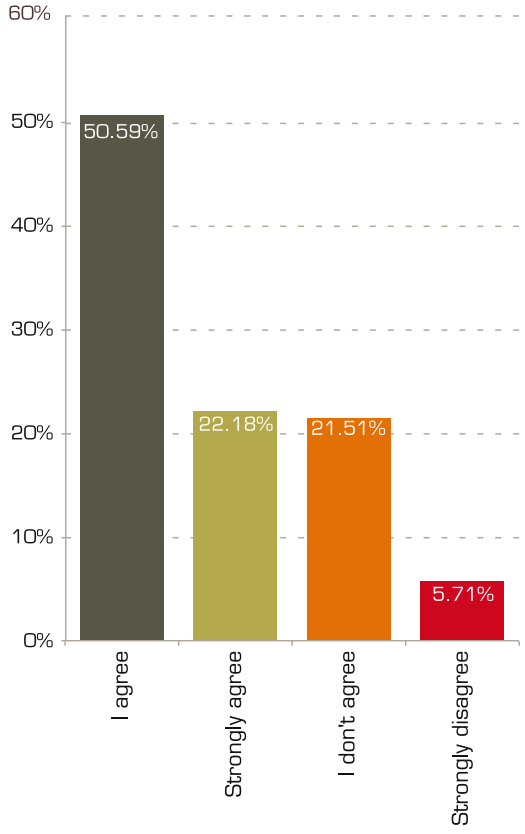
The predominant top-down response involves implementing a lock-step process to grow capability in data analysis and use it, firstly in the Ministry of Education, then in the governorates and then in schools. The process so far has successfully created momentum within the Ministry in terms of data analysis. It has also promoted the growth of capability of data analysis in the governorates. Schools will be provided with support in data analysis in the near future, via the National Assessment Centre and the Specialised Centre for Teacher Training. This gives rise to two challenges. The first is that setting up systems to analyse data will not necessarily guarantee that all three parties, that is, the Ministry, governorates and schools, will look for trends and patterns in order to identify change priorities. Each group could simply move from mechanical reporting of data to analysing it without issues, such as inflation, being addressed. The second challenge is that such support for schools may take some time to be introduced.

Effectiveness rating – partially effective

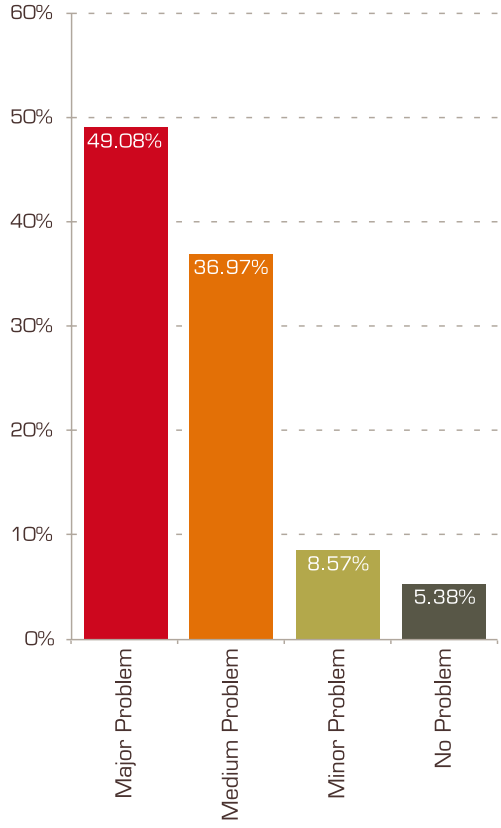
A rating of partial effectiveness is a direct outcome of the partly appropriate response. The focus appears to be on the mechanics of data generation and analysis and not on interpretation of the information to adjust teaching, learning and leadership practices. In other words, an emphasis is placed on the generation of student reports and aggregated tables that show continuous assessment results, examination results and overall averages. These reports and tables are used primarily to calculate a Grade pass or repeat the Grade level. Effectiveness is attached to the extent to which that information is interrogated for improvement. The first and most obvious point of interrogation is the discrepancy between high continuous assessment results and lower end-of-semester examination results and even lower international TIMSS and PIRLS results.

There is a need for robust debate among teachers about the reliability and validity of continuous assessment results. Evaluation Project online survey data (Graph 7.1) indicates that over 73 per cent of teachers are confident that the continuous assessments used by teachers at their school produces valid results on their students achievements. Yet another item on the survey data (Graph 7.2) suggests that over 85 per cent of teachers consider student achievement data to be a major or medium problem.

Graph 7.1 **I am confident that the continuous assessments used by teachers at my school produce valid results on their student achievements**



Graph 7.2 **To what extend is Student Achievement a problem in your school?**



Source: Evaluation Project Survey data 2013

These qualitative data discrepancies in teacher beliefs, coupled with the quantitative data discrepancies between results in continuous assessment, end-of-semester examinations and TIMSS and PIRLS results, provide sufficient evidence to generate deep discussions about the culture of inflated results. Authentic dialogue, generated through the diverse views of students, teachers, school leaders and families is critically important to address issues such as result inflation in continuous assessment.

A start has been made. Subject supervisors are being trained by the Analysis and Studies section in the Ministry of Education to identify and support low achieving schools. The supervisors have been trained to approach those schools identified and talk to the administrators and teachers. A key message communicated to the school staff is that their role is to support rather than punish them for the low

student performance results. The interaction between the supervisors and schools therefore focused strongly on what had to be done to improve student learning (Personal communication, Analysis and Studies Section officials, 31/10/2013).

This Governorate-level development did not happen by chance. It appears to be a positive response to three of the terms of reference in Article 2 of the Ministerial Decree No. 104 (Ministry of Education, 2012) on Formation of Students Achievement Follow-up Committee. Sub-committees in all governorates are expected to:

- Follow-up of student achievement levels at the Governorate's schools and diagnose the points of strength and points to be improved.
- Study student achievements and teaching practices in reality and set action plans for development.
- Study the quarterly statistical analysis and take appropriate actions to improve student achievement.

The enactment of those terms of reference by Governorate subject supervisors, and the actions of examination and student affairs officers, mentioned in the Student Performance component of this chapter, represents evidence-informed learning conversations with schools to address specific student learning needs. This positive development within directorates contributed largely to the rating of a partially effective response.

Efficiency rating – not efficient

The response to the inflation issue is rated **not efficient** because of the length of time it will take to recognise the issue formally as a priority for change and to complete the change process. Given current arrangements, completion of these two steps in systems change will take many years.

School-level analysis and use of student performance information via the Ministry's e-portal is yet to be developed. Before that can happen, the Ministry of Education is aware that there are significant technical, ethical and professional learning issues to deal with before schools can access and use aggregate student performance information (Personal communication, Analysis and Studies Section officials, 31/10/2013). There are moves afoot to deal with these issues. Growing Governorate capability is one and as that grows there should be a flow on effect into schools. Another is the intent to establish a National Assessment Centre. Component three in the current Request for Proposals – statistical analysis and research – appears to be a capability growth mechanism that should go some way to dealing with the data analysis and use issue (Ministry of Education, 2013).

Capability within the Ministry and governorates, coupled with a high performing national assessment and examination centre, will be useful but not sufficient to grow data-aware schools. Those responses are supply-oriented levers for change, which means students, teachers, leaders and families are recipients of what they have to offer. Schools and communities have to wait for those groups to grow capability and set up systems before they can proceed. It will take considerable time before those supply levers are fully operational with sophisticated systems in place to interact with schools.

The focus might helpfully be redirected from students, teachers, leaders and families from being passive receivers of what external experts have to offer, to them being active improvement agents of their own situations. There is an opportunity to capitalise on existing data sets to grow capability within schools to start addressing the inflation problem immediately.

The Ministry sponsored a trial of a ground-up approach through the Evaluation Project's activities with schools early in 2013. The Evaluation Project modelled a way to start growing capability in data analysis linked to practice improvement. Evaluative exercises engaged a sample of 28 schools within Phase 2

of the Evaluation Project in April/May 2013. The exercise introduced these schools to the analysis and use of multiple data sets related to student performance. Over a two-week period the schools conducted and reviewed three evaluative tasks; (1) a diagnostic test in mathematics and science, (2) student/teacher/administrator satisfaction surveys, and (3) evaluative probe interviews about;

- Students' views about their own learning.
- Teachers' views about current and better ways of judging student performance.
- Administrators' views about the characteristics of a high performing school.

Upon completion of the three tasks, the Evaluation Project team returned to the schools to support teachers and administrators to review the tasks and to see if there were any interesting relationships between the data sets.

Subsequent to that in-school learning session, the principal and one other teaching professional from each of the 28 schools attended a follow-up professional learning session in Muscat on 22nd May 2013 to conduct a self-review of evaluative capability from the two-week exercise. They also listened to presentations from leaders of four schools about what they did in the evaluative exercise and what they learned. Participants indicated during the school visits and the leader session in Muscat that the exercise was useful for understanding the value of analysing multiple data sets to lift student performance.

That Evaluation Project exercise provides a useful example of how data capability can be grown within schools prior to the development of more sophisticated data systems being set up between the Ministry of Education, a national assessment centre and schools. Those developments are likely to take several years before they have a positive impact. In the meantime it is not useful to maintain the status quo.

Conclusion

Systems leaders have started building an infrastructure to track and analyse student performance trends. A question has been raised in this chapter about whether or not that infrastructure could be extended from a basic level of reporting and analysing data to consider the end-point use of the data for appropriate academic support for students and related teaching, leadership and systems-level improvements. Building the data-based infrastructure will take time, but learning conversations using valid and reliable data sets can progress immediately.

7.3 Inclusive Education

7.3.1 How the system works

Within current structural arrangements, inclusive education fits within the Ministry of Education's Directorate General of Education Programmes. A Special Education Department exists within that Directorate and it has three sections; Inclusion Classes and Learning Difficulties section, Gifted Students Section and Special Education Schools section. Priority functions of the department are to set policy, assure supply arrangements include preparation of curricula for schools, training for staff and develop follow-up study and evaluation programmes. Functions in the three sections focus on policy implementation and reports to appropriate committees to assure on-going care. Public-private partnership arrangements are also a feature of the Gifted Students section.

These current arrangements have their origins in the mid-1970s when inclusive education started to feature in the Oman education system. A Ministry of Education Special Education Needs section was established in 1974. Its establishment was in keeping with the subsequent Article 12 and 17 of the Basic Statute of the State, which captured H.M. Sultan Qaboos' announcement that everyone in Oman should have a chance to study (Ministry of Eductation, 2008 Doc). A 2008 update of the statute extended that overarching right to specify that individuals with disabilities have the right to education and training, and subsequent expansion into a full department. That right meant that the Ministry was better able to provide programmes and support schools in relation to students with special needs. A programme of inclusion in mainstream schools followed those legal and structural arrangements in 1978.

The definition of inclusive education has broadened progressively in an attempt to implement the UNESCO aim of responding to the diverse needs of all learners. A Ministry of Education national report about inclusive education captures the overall aim: *"The overall aim of the Sultanate's inclusive education approach is to create a learning environment which addresses learners' diverse expectations and needs"* (p.52, Ministry of Education, 2008 doc). The Director General's strategising to achieve that aim was to plan for a shift to an inclusive school culture, inclusive curricular and inclusive pedagogies aimed at catering for diverse learning needs of Oman students. The Director General also recognised the need for general societal acceptance that all schools have a moral responsibility to provide effective education for all children in all communities.

There are a substantial number of students who need support within the inclusive programme in Oman. It is difficult to know exactly how many students are included in the programme because data systems and identification metrics are not able to provide this information. The table below gives some indication that an inclusive programme is critically important for many students. Those 5,000 students with identified disabilities, along with a considerable number of other students with a diverse range of needs from special education through to gifted needs, represents a substantial number of students.

Table 7.4 Number of Omani Children with Disabilities (Ministry of National Economy, Census 2010)

Age Group	Male	Female	Total
6-17 years	2764	2205	4969

Three subcomponents of an inclusive approach have emerged in Oman to cater for the diverse range of student needs:

- Special education schools.
- Inclusive education in mainstream schools.
- Parent and community education.

Special Education Schools

The first component is special education schools, which in UNICEF terminology is referred to as a "segregation system" (p.20, UNICEF, 2010). There are three schools for students with special education needs; Al-Amal for hearing impairments established in 1979, Al-Fikryah for moderately intellectually challenged students set up in 1984 and Omar Bin Al-Khataab Institute for students with visual impairments, which became operational in 1999 (Ministry of Education, 2008.). These three schools are situated in Muscat and this has created a significant challenge for parents in the regions to have their children attend these schools. Generally students in that situation tend to stay in the regions with their families.

As a result of the early stage of special education development in Oman, families choose to send their children with disabilities to any one of three different sites of learning. Table 7.5 shows that there are those who choose to send their children to special needs Schools in Oman (592 in 2010/11), others who choose to send their children abroad to study, such as in Kuwait (34 in 2010/11) and those that prefer to have their children learn in mainstream schools (919 in 2010/11) (Ministry of Education, 2011).

Table 7.5 Oman Students with Disabilities, in Oman and Abroad, 2006-2013.

Place of study			Academic Year						
			06/07	07/08	08/09	09/10	10/11	11/12	12/13
Special Needs Schools	In Oman	Males	432	423	410	395	371	337	355
		Females	292	282	263	248	221	181	198
		Total	724	705	673	643	592	518	553
	Abroad	Males	42	36	33	32	28	30	21
		Females	4	4	4	5	6	10	5
		Total	46	40	37	37	34	40	26
	Total	Males	474	459	443	427	399	367	376
		Females	296	286	267	253	227	191	203
		Total	770	745	710	680	626	558	579
Mainstream schools	In Oman	Males	108	200	265	318	506	685	541
		Females	83	148	212	262	413	509	417
		Total	191	348	477	580	919	1194	958
		Number of schools	17	32	56	69	85	152	119

These special education schools are not intended to operate as standalone units. There is an intent to utilise resources from these three special schools as a mechanism to spread knowledge and skills into all schools about catering for students special learning needs (Ministry of Education, 2008c).

Inclusive education in mainstream schools

The second subcomponent is to grow a culture of inclusion in mainstream schools. The programme is intended to spread an inclusive culture across the entire system; i.e. throughout the Ministry's centralised committees and departments and into the governorates and out into early childhood settings, schools and communities (Hamed & Hassan, 2012; Ministry of Education, 2008). Inclusive elements are an integral part of the Ministry's successive five-year plans to achieve comprehensive school reform in both the Early Childhood Care and Education programme and the school development programme.

Inclusion as an intentional programme was introduced from a few schools to many over the first decade of the new millennium. The system recognised early that there were insufficient trained staff to roll out a large scale inclusion programme (Ministry of Education, 2008). Consequently a couple of projects started the programme. One was a pilot project that introduced a programme called 'partial inclusion' which involved the establishment of special classes in mainstream schools (UNICEF, 2010). The pilot started in two Basic Education schools in 2001. By 2005 the project had been extended to 94 schools and by 2008 included 393 schools. All these schools were assigned with a trained special education teacher to support Grade 1-4 students. While that roll-out was unfolding, an international consultancy company led a project in 2004/5 to develop child-centred methodologies in the first cycle of Basic Education. The Ministry and UNICEF boosted those start-up projects by organising workshops to support teachers to implement an inclusive approach in mainstream schools. These catalysing projects made a start to establish an inclusive culture for all students. In the process the Ministry grew awareness that the inclusive approach and expectation of training to cater for diverse needs creates a much more complex and demanding role for teachers (Ministry of Education, 2008).

From 2010 the scope of inclusive activity broadened. Departmental strategic planning aimed to increase retention and engagement of all students to grade 12 (Ministry of Education, 2010). Retention plans focused on monitoring attendance more closely in an effort to reduce a high drop out rate by students with disabilities. Engagement centred on reducing content-overload and repetitive rote learning thereby promoting student focused learning. Despite careful initial steps toward meeting these ambitious goals it became apparent that more systematic training was needed for teachers to cater for students with special learning needs. That need related to special education teachers as well as mainstream teachers delivering curriculum to students with diverse needs, that is, from gifted through to special education needs.

Special education diploma courses (Learning disabilities) introduced at Sultan Qaboos University (SQU) in 2008 was a useful start but the need for training was much more widespread. It was acknowledged (Ministry of Education, 2008) that any training would need to start by addressing teachers' fundamental beliefs about fixed innate intelligence. That belief was causing a blame mentality; as if students lacked ability or were lazy. As long as teachers continued to define the students as the problem, there was little hope of developing Individual Programme Plans, which were designed and overseen by the Attainment Follow-up Committee to set authentic goals for students with special education needs.

A comprehensive integration program for students with special education needs is now in place for schools to start lifting the level of teacher understanding and skills (Ministry of Education 2013e). However, recent reports indicate that the need for training is on-going for identifying and catering for specific student needs. (Ministry of Education, 2012a; Ministry of Education 2010c).

Several important infrastructural developments have supported the growth of inclusive education. In-school wheelchair access, social care, nutrition and health support programmes have created foundation infrastructural and social/emotional supports in schools (2008). Free transport to attend school is now supporting students with special learning needs and those with disadvantaged backgrounds and from remote areas.

Parent and community education

The third part of the inclusion programme is parent and community education. There have been two important strands to engage parents. The first strand is systems-level support to parents of students with special education needs. The Ministries of Education and Social Development and non-government agencies have collaborated to support those parents and to spread awareness of how to access support (Ministry of Education, 2008). The second strand is adult learning opportunities, especially for women, illiterate adults and those adults who do not have opportunities to learn. The Ministry of Education has created community-based learning opportunities from which some remarkable developments have occurred. For instance, 'A Learning Village' initiative was launched in 2004 in Miraisi in Batinah South with outstanding success in attendance and engagement. Over 250 adults from the village engaged in reading, writing, mathematics and life skills classes. These community-based learning opportunities, coupled with a policy push for equal access for girls in schools, has led to approximately equal numbers of boys and girls in the schooling system. Girls' overall academic performance results now outrank the boys.

7.3.2 System Awareness of Issues and Challenges

There are three pressing issues that need to be addressed to lift the inclusion programme. They are:

1. A need to develop data and information systems about children with disabilities
2. A need to develop well-structured diagnostic tools
3. Provision of adequate training and support for mainstream teachers and associated special education staff to deal with diverse student learning needs.

All three issues point to comprehensive training to grow capability to deal with those three priority issues and related matters of concern.

Awareness of the issue

Fully aware	The issue of the need for comprehensive training is well documented over more than a decade in Ministry reports and strategic plans. Teachers are also aware that provision for students with special needs could be improved.

Systemic awareness of the need for comprehensive training, in particular for regular classroom teachers and special education teachers, has been present for several years and references in recent reports remain prolific. These extracts are typical of the message.

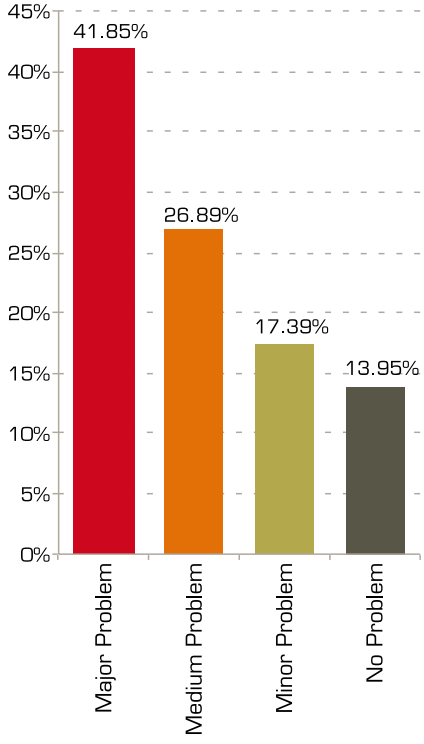
- A UNICEF report in 2010 captured the need: *"This [three-week] training course for previously unqualified teachers in special education doesn't seem enough to provide teachers with skills and confidence to deliver quality education for children with disabilities"* (p.23, UNICEF, 2010).

The Ministry's recent report in partnership with the World Bank is indicative of the high level of awareness. The report states that, "Teachers currently receive little training to adapt teaching methods for class integration of special needs children (Ministry of Education, 2012).

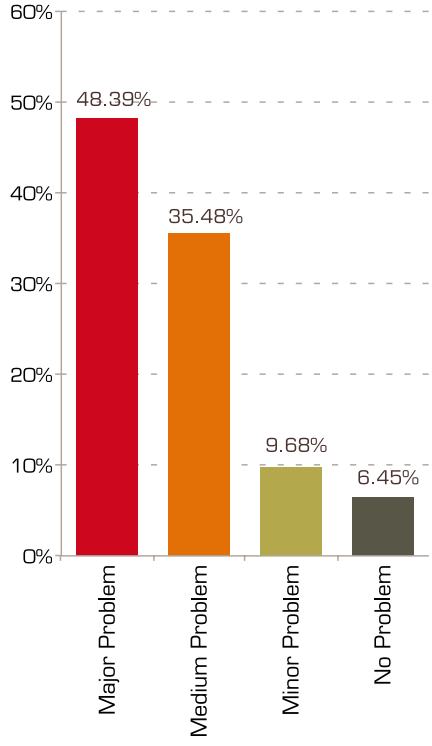
Further training in the development and use of assessment tools to identify students' specific needs and strengths would help to provide the data required to make appropriate next step decisions for students' individual plans. There is strong systemic awareness of a need to recruit more highly skilled and knowledgeable specialists, such as special education teachers and educational psychologists, as the inclusive education programme becomes more sophisticated.

Awareness goes well beyond the centre of the system. The Evaluation Project Phase Three Online Survey found that about three quarters of teachers and administrators were struggling with provision for students with special education needs. The graph on the left below (Graph 7.3) shows that 41% of those teachers found that adequate provision for students with special needs was a major problem and 26% suggested that it posed a medium problem. The graph on the right (Graph 7.4) showing administrators' views paints a similar picture, 48% consider the provision a major problem and 32% a medium problem.

Graph 7.3 Providing adequately for students with special needs



Graph 7.4 Staffing Levels issues



Source: Evaluation Project survey data 2013

In summary, there is no shortage of awareness about the need for higher quality training for teachers and special education staff.

Section Three: System Responses

The table below outlines the ratings for the system response.

System response ratings		
Appropriateness	**Effectiveness rating**	**Efficiency rating**
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

Response rating – partially appropriate response

The response rating is partially appropriate reflecting the need for more and better training for teachers and specialist staff in relation to inclusive education. The partially appropriate rating was assigned because, while there have been courses and seminars that reach a few educators, there does not appear to have been a serious systemic investment made to close the gap between expectations of teachers and specialist staff and their actual capability to provide genuine inclusive education. It appears that the system has underestimated the level of training necessary for staff to develop a culture of inclusion once the law, structures and pilot programmes were put in place. Ever since, the centre of the system has grown incrementally its understanding of inclusion to more sophisticated levels. In turn this growth in understanding has created ever more demanding expectations of staff in schools. Training provision for staff has not kept pace with expectations coming from an increasingly sophisticated centre.

Latest recommendations exemplify sophisticated thinking from the centre of the system.

- The 2012 Ministry-World Bank report suggested among several other things, the need to provide appropriate training to assure coherence in strategy delivery and identification of needs as important pre-requisites for a high quality inclusion programme.
- In a recent interview with the Project Evaluation team, the Director General highlighted several important priorities for improvements to current training arrangements: the need for pre-service and in-service teacher training to improve integration of students with special education needs into regular classrooms; and the need to improve mechanisms that identify and evaluate student progress.
- In the Ministry's 8th Five Year Strategic Plan is an outline of 11 main tasks prioritised to create efficiencies in services and incentives to compliment the high need for training.

In summary, priority developments include; consistent detection and evaluation tools, training and incentives for staff in both special and mainstream schools, growing capacity and capability in specialist roles for a successful inclusion programme, e.g. psychologists. These priorities for development are entirely appropriate to achieve a high quality inclusion programme, but they have been present for many years and been dealt with primarily in an organic manner.

Effectiveness rating – partially effective

The partially effective rating indicates that efforts to implement inclusive education are heading in the right direction. However, development is hindered by assuming a basic and organic approach to training mainstream teachers and special education staff. Most efforts appear to be seminars, projects and generic within-school programmes. A continuation of this approach will ensure that Oman's inclusive programme will improve incrementally but to ensure ongoing systemic support for inclusion and to keep abreast of the global developments, greater sophistication in approach is recommended. Inevitably in an organic development environment there will be exemplar schools at the forefront of inclusiveness, such as one school that the Evaluation Project Team observed in Phase 2 school visitation programme:

> "The school provided for average, gifted and students with special learning needs as a routine. Student achievement levels were known and programmes adjusted to meet student needs. A significant folder of individual remedial programmes was sighted. The Principal encouraged staff to work actively with slow learners and to provide extra opportunities for Gifted students" (Evaluation Project team review of a Phase 2 school visit).

An organic approach has worked to a basic level. A more sophisticated arrangement of highly skilled specialists, such as a team of trained educational psychologists, providing intense support, modelling and training within and across groups of schools would be a useful addition to existing arrangements to build capability to achieve government and Ministry expectations.

At a local level, attempts to lift the quality of training have tended to revert to solutions to address pragmatic obstacles facing existing professional development programmes. The first semester report from a school in Bausher region outlined below gives an indication of localised concerns; venue suitability and lifting teacher motivation to learn. These types of issues in the regions and local communities do not encourage support for high quality professional learning. A lack of enthusiasm on the part of teachers does little to break the circular problem of catch-up training services offered through centralised Ministry systems.

Table 7.6 First Semester report 2012/13 from 'Intellectual Education School' Bausher Region

	Obstacles	How to overcome
1	**Nowhere suitable to implement at school.**	Provision of a well-equipped and conditioned halls for training Independent building for special education school training
2	**Some teachers do not support programmes implemented by their colleagues.**	• Conducting workshops for interested teachers and those who need training courses. • Good utilization of local and international expertise to undertake workshops. • Recognising teacher participation by awarding them certificates accredited by Ministry of Education for attending training. • Cooperation between school administration and Special Education Supervisors to prepare an annual professional development programme. • Good follow up of implementation of recommendations arising from workshops.
3	**Workshops happening in unsuitable places.**	Provision of air conditioners in training rooms.

Efficiency rating – not efficient

The nature of investment has been well intentioned but **not efficient**. It has developed strong support and advocacy for a culture of inclusion among Ministry teams and committees at the centre of the system. However investment in the regions and communities has not resulted in the same level of understanding and capability. There are a few examples of high capability and a considerable number of examples of low capability. The knowledge and capability gap between the centre and staff in schools has remained constant since inclusion education became a priority. Had the investment been efficient an observer would expect large numbers of highly knowledgeable and capable teachers and special needs staff across the country. That is not the case as there is a constant call in documents and plans for higher quality training to be put in place.

Efficiencies are unlikely to come from investing minor adjustments to existing training arrangements. They are more likely to come from concentrating considerable investment into one transformational policy or action that will enable and support the smaller existing policies to increase knowledge and expertise. One example is training educational psychologists and then positioning them to support groups of schools to understand and utilise more effectively the information they gain from seminars, projects and in-school programmes to meeting students' individual needs.

Conclusion

The gap between expectation and provision of high quality services within the inclusive education programme is unlikely to be closed without a substantial investment into high quality professional learning that addresses the on-going problem of catch-up training.

7.4 Learning Contact Time

This final component in student learning investigates learning contact time. The terms of reference focus on officially stipulated and actual length of class periods, school day and year and appropriateness of the schools' daily plan (e.g. number of breaks) in comparison to international practice.

7.4.1 How the system works

The main subcomponents for learning contact time are the stipulated school year, school lesson plan (contact time and weekly lessons per subject) and student attendance.

Stipulated School Year

In 2010/2011 and in previous years Oman specified the student instructional year in decrees by setting start and finish dates for the year spanning 241 days – this included holidays, examination days and study days for examinations. The specific details of which days were to be student learning contact days were not stipulated.

Detailed guidance on the actual dates and number of student learning contact days was introduced in 2011/2012 based on concerns outlined in internal and external reports. The 2012/2013 and 2013/2014 decrees set out the school calendar year with detailed instructions for the number of stipulated learning days (154 days) and examination days (37 days in 2012/2013 and 44 in 2013/2014). In the 2012/2013 year examination and associated study were set at 16 days at the end of semester one and 21 more days at the end of semester two. Grade 1- 4 students do not undertake end of semester examinations but the learning contact days are the same as for G5 -12. For Basic Education and Post Basic Education (grades 1-12), those days make up a 38-week Academic Year.

The Rules and Regulation Section of the School Performance Development Department is responsible; for drafting the annual regulations; ensuring they are approved and promulgated; and monitors and reports on compliance against the regulations.

Stipulated Lesson Plan

Grade 1-12 daily routine has eight lessons lasting 40 minutes each day with each lesson separated by a five minute break. There are longer two breaks each day. The first break is 15 minutes after lesson three and the second is 20 minutes after lesson six. There is a slight time change for summer and winter daily programmes; summer times are from 7:15am to 1:45pm and winter times are from 7:30am to 2:00pm. Summer timings start on 1 April to 31 October. Winter timings start on 1 November to 31 March. Governorates in the regions are able to adjust school times according to their circumstances.

The first table outlines the school plan for Cycle 1 Grade 1-4 students and the second one presents the school plan for Cycle 2 Grade 5-10 students. Each grade level has 40 lessons per week. Priority time is given to Arabic, mathematics, Islamic Studies and science as they are core subjects and count the most in grade level promotions from Grades 5 to 10.

Table 7.7 Cycle 1 Grade 1-4 School Plan, 2012/2013

Subject	Grade/number of weekly lessons			
	One	Two	Three	Four
Islamic Studies	6	6	6	5
Arabic	12	12	10	7
English	5	5	5	5
Math	7	7	7	7
Science	3	3	3	5
Social Studies	0	0	2	3
IT	1	1	1	2
Life Skills	1	1	1	1
Physical Education	2	2	2	2
Arts	2	2	2	2
Musical Education	1	1	1	1
Total of lessons	**40**	**40**	**40**	**40**

Table 7.8 Cycle 2, Grades 5–10 School Plan, 2012/2013

Subject	Grade/number of weekly lessons					
	Five	Six	Seven	Eight	Nine	Ten
Islamic Studies	5	5	4	4	4	4
Arabic	7	7	7	7	7	7
English	5	5	5	5	5	5
Math	7	7	8	8	8	8
Science	5	5	6	6	6	6
Social Studies	4	4	4	4	4	4
IT	2	2	2	2	2	1
Life Skills	1	1	1	1	1	1
Physical Education	2	2	1	1	1	1
Arts	1	1	1	1	1	1
Musical Education	1	1	1	1	1	1
Career Guidance	-	-	-	-	-	1
Total of lessons	**40**	**40**	**40**	**40**	**40**	**40**

Student Attendance

A key factor in learning contact time is the amount of time students spend at school within the available student learning days. To assist schools and the system to track student engagement with schooling a centralised database system, the E-portal, was implemented in the mid-2000s. Over the last four years

schools have been provided with assistance to support them to record a wide range of school data on the central database.

The following table sets out the use by schools of the student absenteeism recording function of the E-portal system over the last 4 years.

Table 7.9 Student absenteeism data

Academic Year	2009/2010	2010/2011	2011/2012	2012/2013
Total schools recording student absenteeism data (in 2nd semester of academic year).	495	567	834	1018
% of total schools represented.	48%	54%	80%	99%

7.4.2 System Awareness of Issues and Challenges

Ensuring that schools deliver stipulated student learning contact days and lesson plans, and that students attend school is not a straight-forward matter in any education system. The Ministry of Education World Bank report (Ministry of Education, 2012) and internal Ministry discussion documents (Ministry of Education unpublished report, 2011) highlighted the issue of low learning contact days compared with international benchmarks. For example, in these reports there were estimates that placed the average student learning days in the range of 110 to 130 days per annum.

Evidence of a wide range of constraints are found in Ministry reports and in dialogue among Oman and Consortium team members of the Evaluation Project. Some cited constraints are listed below.

Ministry of Education Report (2011):

- A perception among many parents, teachers, principals and supervisors that the school day and year are long enough and/or too long.
- Class/school closures for study leave and examination times beyond the stipulated times.
- Class/school closures for holidays beyond the stipulated times.
- Early school closures on the last working day of the week to allow transfer teachers to return to home village/town for the weekend.
- Competitions and school activities committees' extra curricula activities beyond allocated times.
- Unusual events such as HINI flu and Cyclones Gonu and Phet.

Evaluation Project (Evaluation project Team Interview, 15/10/2013):

- Class cancellations due to teacher absences in some schools.
- Transport problems at the start of the year in some schools.
- Students not allocated to schools at the start of the school year.
- Late arrival of textbooks.
- Late arrival of teachers to assigned schools at the beginning of the semester.

Some of those constraints relate to everyday life, such as health matters and environmental disasters. Others are more manageable.

There have been successive recommendations to mitigate the constraints constraining efforts to achieve a longer learning contact time. The 2011 Ministry study into the number of days available to students suggested:

- The annual school calendar be checked against holidays and exam schedules to ensure stipulated student learning days are possible within semester start and end dates.
- Removal of end-of-first-semester examinations.
- Timetable Grade 5-11 examinations with Grade 12 examinations.
- Reduction or removal of study leave before examinations.
- Review of schools' involvement in competitions to minimise disruption to teaching and learning.
- Carry out a study on ways to ensure schools do achieve stipulated learning contact days.
- Introduction of a publicity campaign to promote adequate instruction time for students to succeed.

Awareness of the issue

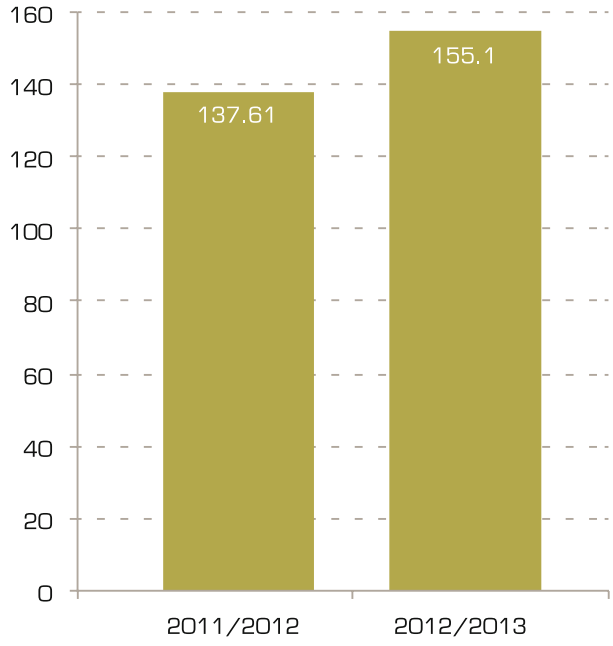
Fully aware	Systems leaders are fully aware of both the constraints that slow progress towards increased learning contact days. The issue of ensuring learning time aligns with international benchmarks and that schools meet stipulated requirements is well documented in Ministry reports, both published and unpublished, and in everyday conversations in the Ministry of Education.

7.4.3 System Responses

The Ministry has responded to the issue of lower than international benchmarks and limited school compliance to school contact time with a three-pronged approach. The first is a stipulation of official school learning days in sufficient detail for the regulations to be followed and monitored accurately. This was followed by an intensive school awareness campaign on the requirements of the regulations and extensive monitoring by the Rules and Regulation Section of the School Performance Development Department (220 schools across all regions received a compliance monitoring visit in 2012/2013). At the same time the continued implementation of the new E-portal system was developed to provide a more comprehensive central database that has allowed the system to monitor the impact of the new approach to the regulations.

The following graph displays the results of analyzing the data extracted from the E-portal data over the years 2011/2012 and 2012/2013. In the second semester of the 2011/2012 year 834 (80%) schools and in the second semester of the 2012/2013 year 1,018 (98%) schools recorded student absenteeism data in the E-portal. This graph suggests an overall increase of 20 actual learning contact days between 2011/2012 to 2012/2013.

Graph 7.5 **Total Average number of days students were present at school for 2011/2012 & 2012/2013**



Oman systems-leaders stipulated 154 days of student learning contact and oversaw the continued implementation of a system to track and analyse compliance. At the time of writing this report the E-portal data indicates that in the 2012/2013 year Oman schools were open on average for the stipulated 154 student learning days.

Based on the 2012/2013 average of 154 days and using the following table as a guide it is noted that:

- Oman in 2012/2013 was above the OECD average for total learning contact hours per year at Cycle 1 level.
- However, the system achieves these student learning hours by having more hours per day (5.3 hours per day compared to OECD average of 4.3 hours per day) over fewer weeks (31 weeks compared to OECD average of 38 weeks).

Table 7.10 Student Instruction

	Number of days of student instruction per year		Net student instruction time per year, in hours		Student Instructional time per week, in hours		Student Instructional time per day, in hours	
	Primary education	Lower secondary education	Primary education	Lower secondary education	Primary education	Lower secondary education	Primary education	Lower secondary education
Australia	196	196	953	1,009	23.7	25.1	4.9	5.1
Canada	183	183	919	923	25.1	25.2	5.0	5.0
Chile	182	182	1,007	1,083	26.5	28.5	5.5	6.0
England	190	190	861	912	22.7	24.0	4.5	4.8
Finland	189	189	626	856	16.5	22.5	3.3	4.5
Germany	193	193	702	890	17.8	22.5	3.6	4.6
Hungary	183	183	572	659	15.5	17.8	3.1	3.6
Ireland	183	167	869	935	23.7	28.0	4.7	5.6
Japan	200	200	754	866	18.9	21.7	3.8	4.3
Korea	220	220	632	850	15.8	21.3	2.9	3.9
Norway	190	190	748	855	19.7	22.5	3.9	4.5
Oman	154	154	821	821	26.7	26.7	5.3	5.3
Spain	176	176	875	1,050	23.6	28.4	5.0	6.0
OECD average	185	185	791	907	20.8	24.1	4.3	4.9

This appears to be a major system achievement. The Ministry of Education is in the position that it now has a system and a comprehensive set of benchmark data that it can use to work with schools and Governorates to assess attendance patterns, review the validity of the 2012/2013 data set and develop processes to ensure the robustness of future data sets. The system now has the opportunity to analyse school learning contact time by region, school type and individual school. Providing this data in a timely and usable manner to schools, governorates and Ministry directorates will increase the value of the data and lead to an increase in the care taken to enter and monitor the quality of the data.

The E-portal data from 2012/2013 and the data set for 2013/2014 combined with internationally-benchmarked data will provide Oman systems-leaders with an opportunity to consider evidential based next steps in terms of student learning contact time.

System response ratings		
Appropriateness	Effectiveness rating	Efficiency rating
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

Appropriateness rating; appropriate

The response to the issue of increasing contact time is considered appropriate. There are two reasons for that rating. First, the response moves closer to ensuring that schools and communities understanding the need for more contact time. The Consortium notes that the ongoing response by the system needs to extend beyond compliance-level understanding. There was no explicit reference in the response to encourage data analysis and use to understand constraints at a deeper level or plans to mitigate identified constraints and excite students into formal learning at school. That opportunity now exists with the widespread use of the E-portal by 99% of Oman's schools.

It is also noted that the current thinking within the system about learning contact time primarily to formal learning in classrooms. There is no reference to informal learning in homes or in the community. Systems-leaders across the world are discussing the integration of formal and informal learning, which brings into focus learning contact time in settings beyond the classroom (Global Education Leaders Programme 'Hannon et al (2013)', 2012; OECD Innovative Learning Environments, 2013). Systems-leaders are encouraged to look beyond the here-and-now and think in a more future-focused way.

Effectiveness rating: effective

The Ministry's response demonstrated decision-making expressly designed for the Oman context rather than following through on generic recommendations from external reports. Not pursuing the Ministry-World bank recommendations, for instance, was premised on a belief that the cessation of end-of-first-semester examinations would cause students to forget curriculum content by year-end exams. It was not considered to be good for progression. This thinking is connected closely to the importance placed on rote learning in Oman curriculum delivery. Underlying these connections is a systems-level desire to retain disciplined learning, a foundation pillar of the Oman education system, which remains highly valued. Omani self-determination is evident at the systems-level.

The response also identified that the Ministry of Education has the capability to monitor movement toward the increased learning contact days goal. It recognises that the infrastructure for monitoring is adequate and the Consortium verified this situation in downloading and analysing data from the E-portal. With a robust system in place to ensure data integrity and monitor progress, debate around actual contact days against stipulated days is expected to diminish. The debate can then move to the quality of the student learning contact time.

There is also a political overlay affecting the effectiveness of the Ministry's response. There are widespread stakeholder concerns about any move to extending the school day and/or year. The approach to move towards and monitor 191 days in school (within existing semester boundaries) and grow community awareness around doing so presented an image of 'move to' the previous goal rather than 'have to' go to a new goal. Furthermore, the response shared responsibility between teaching professionals and the community. Growing community awareness appears to be an attempt to break a community-level habit of fitting school around other family, cultural and community matters. For many

Omani citizens there are valid competing reasons not to go to school. Increasing a wider motivation to attend school may be more fruitful that imposing stringent regulations that force families to reduce non-school related activities that they value highly.

Efficiency rating; efficient

Efficiency in the response to learning contact time is rated 'efficient'. The system appears to have achieved on average an increase of 24 additional student contact days over a two year period (130 days estimated in 2010/2011 to 154 days in 2012/2013). With approximately 500,000 students in the education system this increase equates to an additional 12 million student learning days per year.

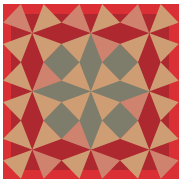
The Consortium notes though that as a next step, in terms of efficiencies, some thought may be given to the potential utilisation of resources attached to students' informal learning arrangements. Thinking about ideas such as bring your own devices (BYOD), creating school-home Wi-Fi connectivity to link families to student learning, and setting up safe blogging arrangements so that students can receive feedback about their storing/report writing beyond the teacher. These examples connect elements of formal learning inside classrooms with informal learning outside classrooms. Obvious efficiencies surround the merging of school, family and community learning tools and infrastructure for connectivity. More subtle efficiencies are played out through teachers getting more time to spend with students with challenging needs while other students take more ownership of their learning.

Conclusion

Oman systems-leaders have identified and stipulated in detail 154 learning contact days per year for schools. That decision, coupled with monitoring progress towards that goal and growing community awareness around the value of sufficient on-task time in formal learning, is extremely positive. The relationship between the time that students engage in formal learning and the time they spend on informal learning requires further consideration. An extended notion of learning contact time might include the education that occurs in classrooms, schools, families, community and the wider world via digital technologies.

CHAPTER 8

TEACHERS



The Terms of Reference for the Ministry of Education Evaluation of the Education System (Grades 1-12) set out the following components for the evaluation of the Teachers aspect:

1. **Classroom effectiveness including:**
   - Teacher instructional support systems within schools – senior teachers, principals and the use of mechanisms such as coaching.
   - Effectiveness of subject supervisors in supporting and evaluating teachers.
2. **Professional development including:**
   - Ascertaining needs, delivery methods, effectiveness.
   - Effectiveness of training and support given to newly qualified teachers.
3. **Workload including teaching loads, class sizes and administrative duties.**
4. **Job satisfaction among teachers and ways to improve their motivation.**

Summary

The teacher workforce in Oman has undergone a series of radical changes in the past 8 to 10 years that have had considerable impact on the education system. In 2005 Oman had 37,500 Grade 1 to 12 teachers. In 2012 it had 53,000. A 41% increase in a teaching population in 7 years places an enormous load on the education system.

It is a young and inexperienced workforce relative to international standards. When considered by regions across Oman, there is a wide variation in teaching experience. Some regions have significantly more inexperienced teachers compared to others. There is also a wide variation in the weekly teaching time allocated to teachers. Some teachers have quite high workloads and others very light workloads.

The Ministry of Education has communicated pro-active plans to grow teacher effectiveness in the future. Strategies include establishing, promoting and monitoring teacher standards and another is to drive towards a better-qualified teaching force, and in this regard the Ministry is supporting teachers to upgrade their qualifications.

A transformational strategy to lift the quality of teaching was the Ministry's announcement in 2013 of a contract to develop a Specialised Centre for Teacher Training, to be established in Muscat. The aim of the Specialised Centre for Teacher Training is to play a leading role in the implementation of on-going educational reform. This initiative will play a lead role in improving teacher effectiveness in the future.

A further initiative is to progress a new Education Law that, if introduced, would address a range of teacher effectiveness issues. Aspects covered by the draft Education Law include the setting of occupational and academic standards for applicants to educational posts, and linking training to functional upgrading.

However there is a very strong interdependency between the Specialised Centre for Teacher Training, curriculum standards project and Education Law. Over time the training centre will give teachers the skills, confidence and desire to trial and adopt new teaching and methodologies in their classrooms. The Oman curriculum must provide the opportunity and flexibility for these teachers to practice their new knowledge and skills in the classroom. The proposed Education Law will provide the opportunity and requirement for the Ministry to implement a performance management system for teachers. This performance management system must also provide the opportunity and expectation that teachers will adopt new teaching practices without concerns that these new methods will impact on there performance ratings.

While these are important initiatives, it appears that some sectors of Oman society have chosen to script and narate a negative story about the teachers that serve Oman students. There is considerable evidence to support that negative story. However, an overarching story of that nature masks many positive elements attached to the teacher workforce that could turn the negative story into a positive one. Data bases now exist that can assist systems leaders as well as teachers to identify those positive elements and build on them. The Consortium advocates positive scripting through a set of carefully selected strategies. Oman systems leaders are on track for introducing such a set of strategies but they have considerable work to do to turn around the overall negative stories about teachers to positive ones.

For example, another way of considering Oman's situation is that while many countries are challenged with an aging teacher workforce, Oman is gifted with a youthful workforce skilled in 21st century technologies. Within a decade, teaching workforces with the compositional makeup of countries like Oman could lead the world.

If systems leaders and teachers can work together to maximise the time teachers have to positively influence student learning, the negative stories could quickly turn into positive ones. The teaching workforce is young, vibrant and capable in 21st century technologies, and, the Consortium found that, when provided with the opportunity, they were energised by analysing various data sets to influence their beliefs and practices about teaching. There was also considerable energy within the Ministry team involved in the Education Evaluation Project to analyse available data sets more carefully and not make assumptions based on overall averages. These developments diffused across the system represent the nub of an idea, i.e. analysing data sets to improve teaching, leadership and Ministry practices, will generate energy that grows capability within and between these groups.

8.1 Overview

Support for teachers primarily resides with the Ministry of Education's Director General for Human Resources Development, under which there are four departments and one centre; the Education Supervision Department, the School Performance Development Department, the Training and Qualification Department, the Training Impact Evaluation Department, and the Main Training Centre.

These Ministry departments and centres as well as other related departments, such as the curriculum development and special education departments, are fully aware that human resource development is a key factor in successfully implementing the government's reform programme and developing a quality education system. As the human resources, and more specifically teachers, represent by far the Ministry's most significant investment, it is essential that it promotes a well-trained, well-informed, and highly motivated and professional workforce.

As the Oman system moves on from an early infrastructural development phase to a 'qualitative improvement' phase, the Ministry is now committed to a number of strategies to lift the profile and performance of teachers. The 8th Five Year Strategic Plan (2011-2015) outlines a clear programme of work for developing the teaching workforce. It sets out the following goal, " ... to increase the efficiency of the performance of the human resources and the level of their skills in order to meet the quality of work" (Ministry of Education 2010c, p. 9). This goal is to be achieved by implementing a number of key strategies.

One strategy is to establish, promote and monitor teacher standards and another is to drive towards a better-qualified teaching force, and in this regard the Ministry is supporting teachers to upgrade their qualifications. As a result, teacher qualifications have significantly improved with some 83% of teachers holding either a bachelor's degree or a post-graduate qualification by the end of the 2010/2011 school year (Ministry of Education 2011a, p. 98). Furthermore, in co-operation with the University of Leeds (UK), the Ministry has undertaken a major initiative in up-skilling Omani teachers in a Bachelor of Arts in Teaching English to Speakers of Other Languages (TESOL) qualification (Ministry of Education 2006, p.87).

A strategy to lift the quality of teaching was the Ministry's announcement in 2013 of a contract to develop a Specialised Centre for Teacher Training, to be established in Muscat. The aim of the Specialised Centre for Teacher Training is to play a leading role in the implementation of on-going educational reform. It is intended that the Specialised Centre for Teacher Training will:

- Develop highly skilled, confident and motivated educators by providing sustained, intensive, accredited professional development.
- Achieve impact by working with all schools and a high proportion of teachers and regional officials.
- Send a clear message to the profession and the wider public that improvements are a priority by providing and reporting high status, high profile developments and achievements. (Ministry of Education, 2013c, p.2).

These strategies coupled with others that are detailed in the following components about teachers indicate considerable system-level commitment to lift the quality of teaching in Oman as a contribution to the overall reform movement.

Before detailing the components of the Teachers aspect, there is some compositional information about the teacher workforce that is worth a mention. It is useful information to foreground two of the key issues raised in this chapter; (i) maximising the potential of the teaching workforce, and (ii) scripting teachers as credible and valued professionals.

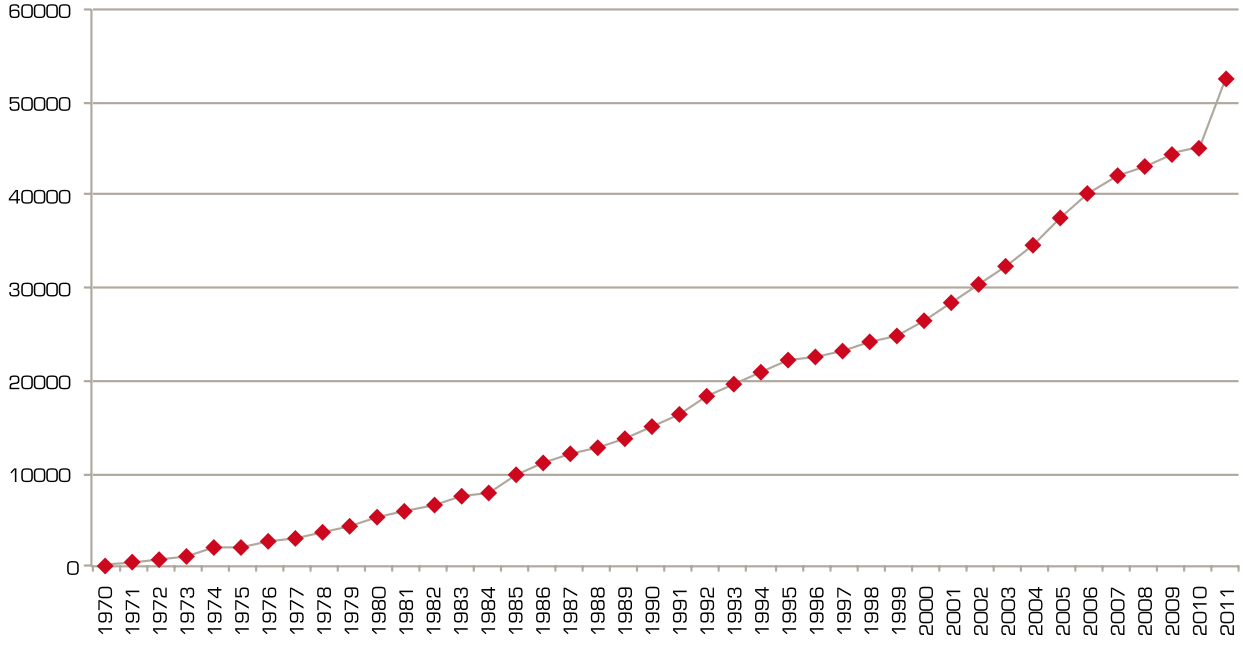
Some might think that Oman's teaching workforce is the system's biggest challenge. Another way of considering this situation is that while many countries are challenged with an aging teacher workforce, Oman is gifted with a youthful workforce skilled in 21st century technologies. Within a decade, teaching workforces with the compositional makeup of countries like Oman could lead the world.

Oman is gifted with a youthful workforce skilled in 21st century technologies.

There are five overarching points about the composition of the Omani teaching workforce that have been taken into consideration in this chapter.

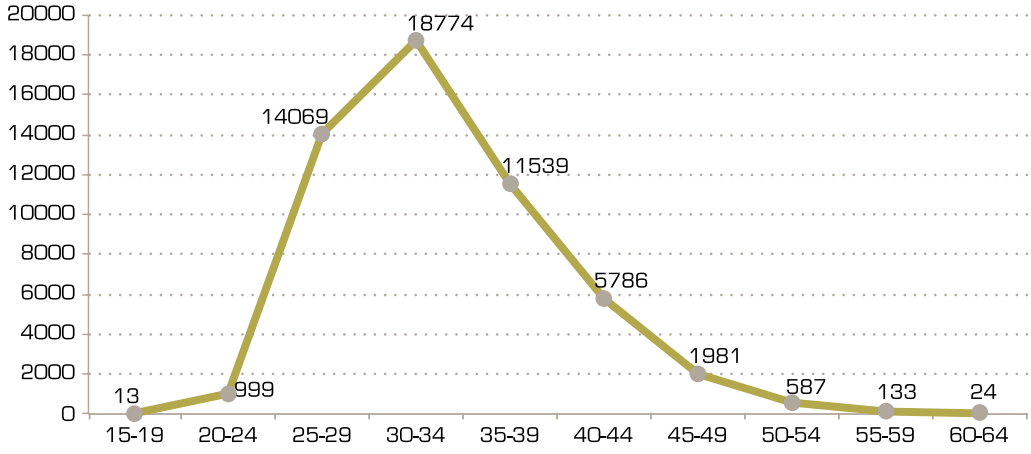
The first is the rapid growth in the number of teachers in recent years. The graph below shows that the growth of the teacher workforce grew steadily from 1970 through to about 2004, after which there has been a significant spike upwards (Ministry of Education 2012b). The number of teachers employed has increased from 37,500 in 2005 to 53,000 in 2012. During the same period, the number of students enrolled in schools has dropped from a total of 568,000 to 518,000 (Ibid). Many of the new teachers are Omani, in line with the policy of Omanisation and is a shift away from an earlier reliance on expatriate teachers to meet the required workforce quota. The rate of Omanisation of the teaching workforce increased from 80 percent in 2004/2005 to 89.2 percent in 2011/2012 (Ministry of Education 2012b, p.93).

Graph 8.1 Growth of Teacher Workforce from 1970 to 2011



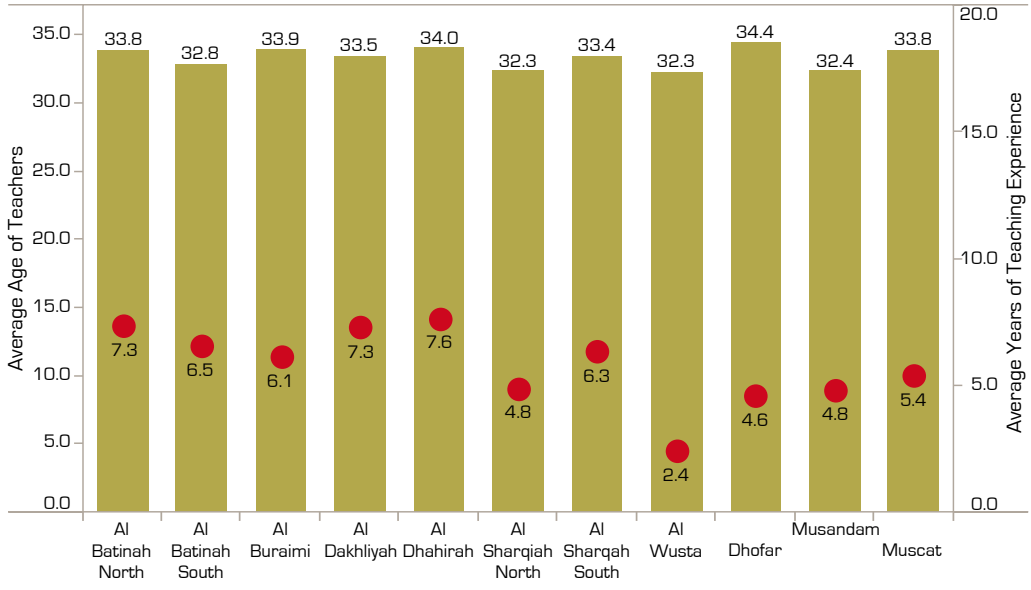
The second overarching point about composition is that the Oman teacher workforce is young by international standards. The graph below shows that the average age of Oman teachers is 34.6 years. There were 39.9% of teachers between 20-29 years of age. In 2010 the OECD average for teachers under the age of 30 ranged from 10% (senior secondary) to 15% of the total teaching workforce in primary schools (OECD 2010). A youthful teacher workforce is compounded by the relatively young retirement age from teaching (at 60 years) or after twenty years of continuous service, and contributes to the low teacher attrition rates observed.

Graph 8.2 **Average age of teachers, 2012/2013**



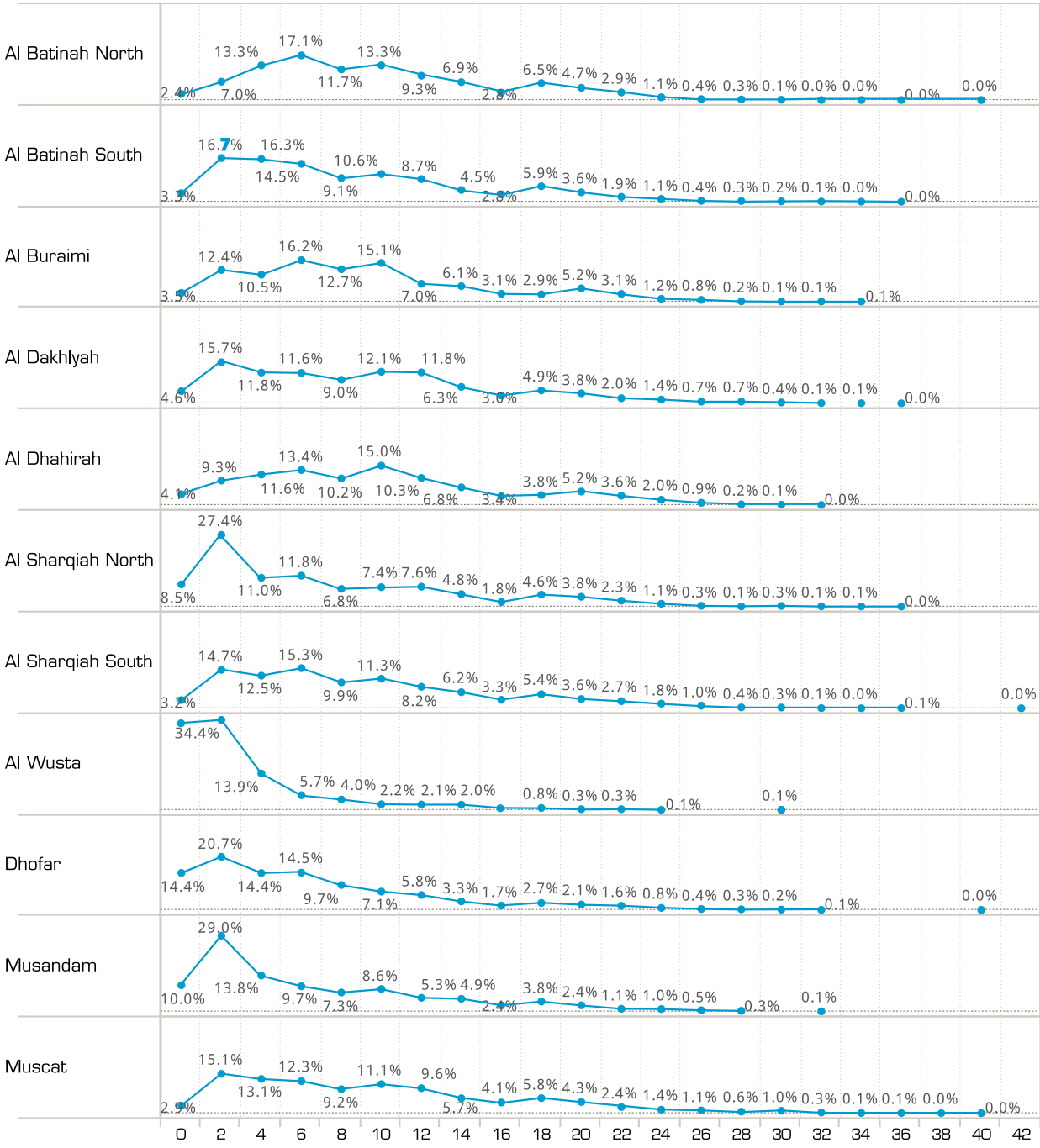
The third overarching point about composition is that there is a wide variation in the work experience composition of the teacher workforces when considered by region. This next graph below shows that regional variations of the average age of teachers overall is minimal and that there is a little variation in the average years of experience by region.

Graph 8.3 **Average age and experience of teaching staff by region, 2012/2013**



Within these averages there are major differences between regions when the composition of the workforce is considered by years of experience as a percentage of teachers within the region.

Graph 8.4 **Years of experience of teaching staff (Histogram) by Percentage of Teachers in a Region, 2012/2013**



At the extremes the teaching workforce in Al Wusta has 67.4% of its teachers with less than three years experience while the workforce in Al Batinah North has 9.4% of its teachers with less than three years of experience.

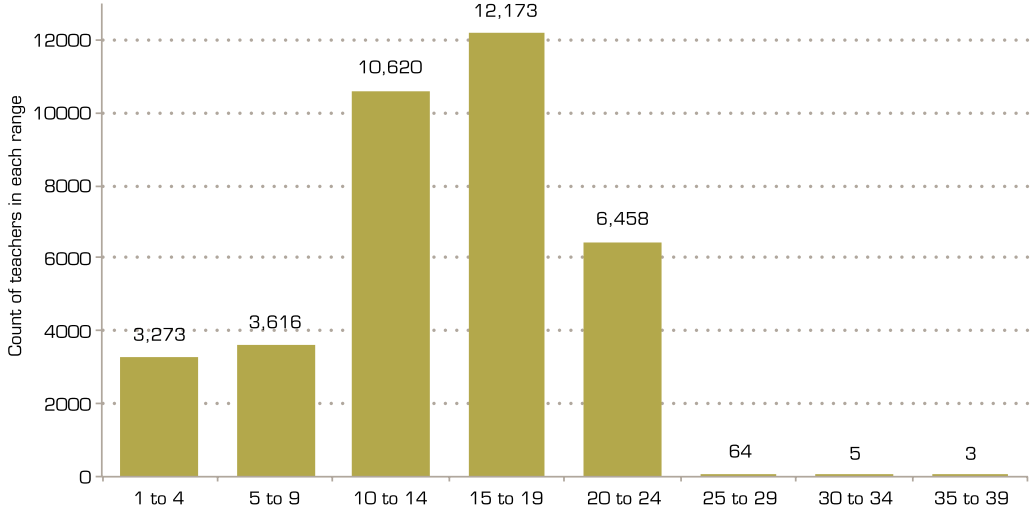
Table 8.1 **Teacher experience by Region, 2012/2013**

Region	Less than 1 years teaching experience	Less than 3 years teaching experience
Al Batinah North	2.4%	9.4%
Al Dhahirah	4.2%	13.5%
Al Burami	3.5%	15.9%
Al Sharqiah South	3.2%	17.9%
Muscat	2.9%	18.0%
Al Batinah South	3.3%	20.0%
Al Dakhliyah	4.7%	20.4%
Dhofar	14.0%	34.7%
Al Sharqiah North	8.5%	35.9%
Musandum	10.0%	39.0%
Al Wusta	33.0%	67.4%

One of the reasons for this situation is that teachers do not go to some regions by choice. They are typically sent to that region after training and complete a few years service before seeking and gaining transfer to other regions to teach.

The fourth overarching point about the composition is that there is a wide variation in the weekly teaching time allocated to teachers. This variation occurs within and across subjects, regions, and school types.

Graph 8.5 **Count of teachers (excluding Senior Teachers) by Lessons per Week Ranges, 2012/2013**



The fifth demographic feature of the teacher workforce is the predominance of females choosing teaching as an occupation. Female teachers, totalling 33,632 in the 2011/2012 academic year, make up almost 70% of the teaching workforce (Ministry of Education, 2012b, p.93). Cycle 1, girls Cycle 2 and Post Basic schools are predominantly taught by female teachers. This is partly due to the Ministry's policy that all teachers in Cycle 1 schools should be female. Male teachers teach students in boys Cycle 2 and Post Basic schools.

In summary, the teacher workforce is predominantly young adults with a weighting towards women, overall teaching experience is limited and variable by region, and the allocated teaching time is variable. Looking at this workforce through a problem-based lens, student learning could be considered at serious risk and urgent 'fix-it' strategies are necessary to up skill the teacher workforce and address the potential inefficiencies in staff workload allocations. In contrast, a view of the same workforce through an appreciative lens, is that system leaders have a young and captive audience, with the capacity for learning on the job and, if engaged in the right way, the potential to be long-term key contributors to the success of Oman's education system.

8.2 Classroom Effectiveness

8.2.1 How the system works

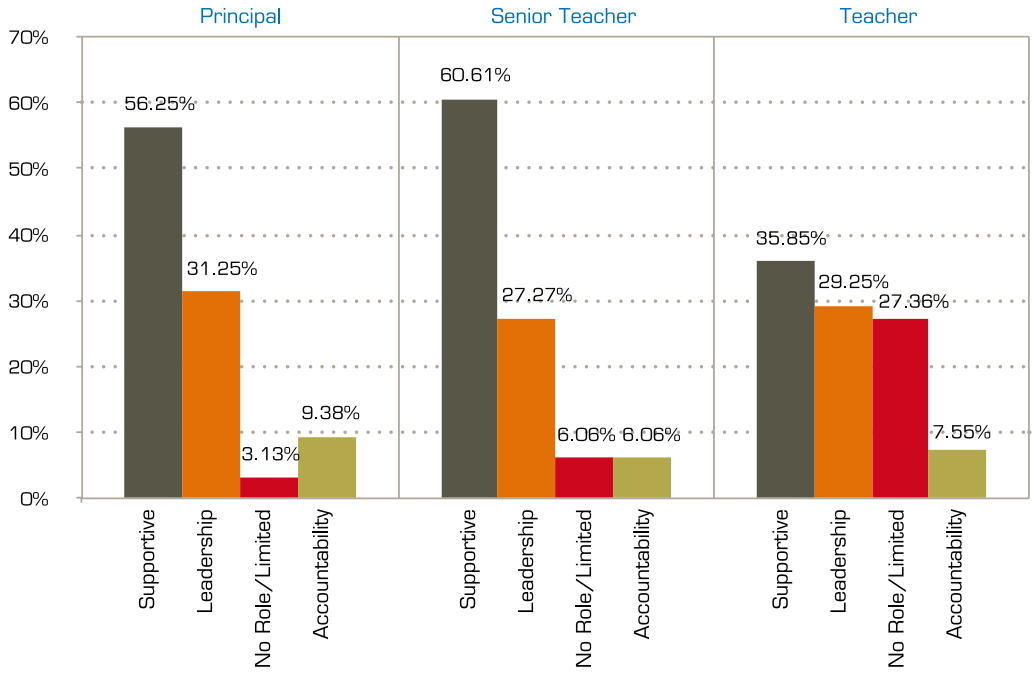
System leaders have created several elements to develop and support teacher effectiveness in the classroom in Oman. The elements begin as foundations for classroom effectiveness and end with higher order elements introduced recently, or under development for future implementation.

The first element is the mix of students that teachers are expected to teach, which appears to be based on a mixed gender-developmental rationale. Boys and girls are taught in the same classrooms up to grade four in Cycle 1 schools. Teachers in Cycle 1 schools tend to teach one Grade level of students for a number of curriculum subjects. In Cycle 2, boys and girls are taught in different classrooms or different schools and, in Post-Basic education in different schools. Teachers at Cycle 2 and Post Basic schools are specialised in one subject area.

Second element of teacher effectiveness is teaching the curriculum as prescribed in the curriculum guidebooks and student curriculum workbooks. The use of these curriculum guidebooks ensures conformity of lessons taught, the sequence the lessons are delivered in, and curriculum coverage for students across the school year.

A third element of teacher effectiveness involves monitoring the quality of instruction. Where there are four or more teachers in one subject area a senior teacher is appointed for this purpose in their subject area. Monitoring instruction is firstly the responsibility of the senior teacher who undertakes regular informal classroom observations. Subject supervisors and principals take the monitoring role in small schools with no senior teachers and are second and third tier supports in schools with senior teachers in place. In schools with no senior teacher a subject coordinator is assigned from one of the subject teachers.

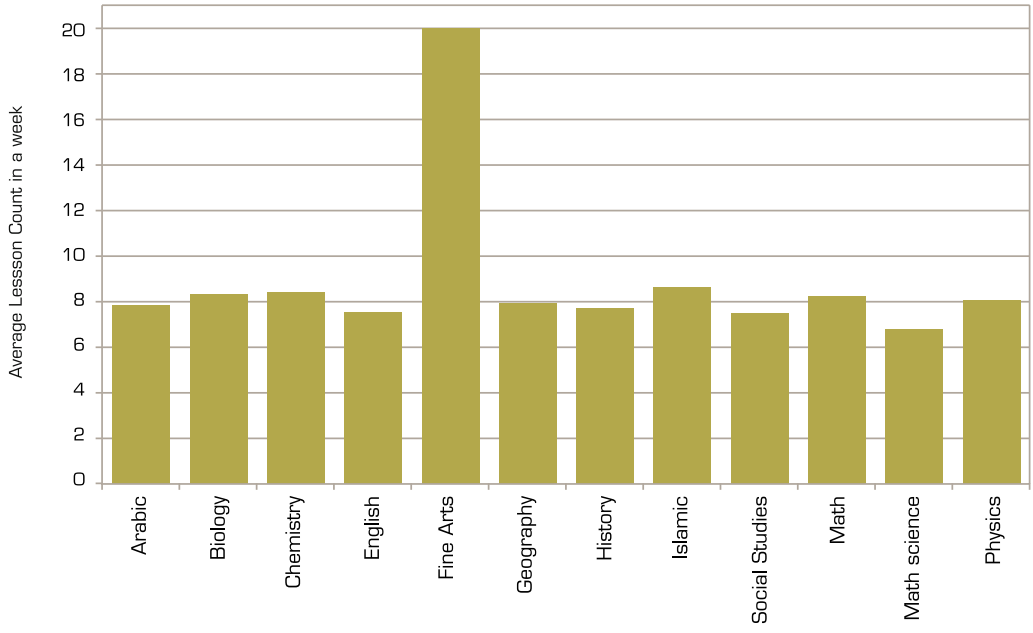
Graph 8.6 **What is the senior teachers role? (Supportive Environment)**



Source: Evaluation Project survey data 2013

Senior teachers have been allocated significant time on a weekly basis to provide this support. The average weekly teaching time of a senior teacher is approximately eight periods a week across all subject areas except fine arts.

Graph 8.7 **Average Lesson Count for Senior Teachers, 2012/2013**



The Ministry of Education has also communicated pro-active plans to grow teacher effectiveness in the future. One communication is the 8th Five Year Strategic Plan (2011-2015). The HRD section (Goal 5) sets out the intention to: *"Expand implementing the school performance development system and develop its tools and mechanisms."* The intention of the goal is to, "raise the efficiency of the teacher and lift student school achievement levels." (Ministry of Education, 2010c). The plan identified a number of developmental priorities to achieve this goal including: increasing training classes for teachers and supervisors, setting a plan to lift school achievement, undertake an investigation of education and supervision issues and to reclassify schools to ensure that teachers are not teaching at more than one level.

The Ministry of Education has also communicated pro-active plans to grow teacher effectiveness in the future.

A second communication is a Ministry press release (ONA, 2 October, 2013), which alludes to draft Education Law that, if introduced, would address a range of teacher effectiveness issues. Aspects covered by the draft Education Law include: the setting of occupational and academic standards for applicants to educational posts, and linking training to functional upgrading.

The recent unpublished University of Cambridge Report (2013, p.19) recommends the promotion of two additional elements of teacher effectiveness. The first element is peer mentoring and observation. This element is not new to Oman. It was first promoted in the Access to Success report (Ministry of Education 2006) and the Ministry's Supervision Department has been trialling it in different forms since that report (Personal Communication, 24/11/2013). The second recommendation is to promote rigorous learner feedback on teachers' practice to improve classroom effectiveness.

Instructional supports to teachers include supportive curriculum guidelines, support inclusive of supervision and coaching and mentoring from senior teachers, supervisors and the principal.

Supportive curriculum guidelines are part of standard tools issued to Basic and Post Basic Education schools by the Ministry of Education (see Chapter 10, Curriculum and Assessment).

Classroom observations are a feature of in-school leadership and supervision support to teachers. Formal observations are led by the supervisor and, nowadays, are often in partnership with a senior teacher. A report is written each time and accumulated findings are used to grade teachers in an annual report. Informal observations are also arranged four times a semester with follow-up discussions. Performance issues coming out of the formal and informal observations are dealt with by senior teachers as developmental next steps via workshops, coaching and mentoring. The Cambridge Report (2013) outlines the need for a more coherent framework of teacher observation and evaluation of practice in order to measure the impact of teaching and learning on student performance. (2013, p. 19).

Coaching and mentoring programmes is another feature of instructional support (Ministry of Education 2006, p. 94). The aim is to select experienced and skilled teachers as mentors and provide them with appropriate training. It is ideal for mentors and teachers to work in the same building and it is essential for them to be given a time allocation to meet together. School principals and administrator training is provided on how to support mentor programmes in their schools.

Supervisors

Responsibilities of the Educational Supervision Department include the following:

- Develop an integrated programme of the methods of educational supervision in public schools.
- Develop an annual plan of Educational Supervision for each subject.
- Identify the training needs of teachers and supervisors.
- Develop criteria for the nomination of teachers for positions of educational supervision and participate in the nomination of supervisors.
- Selection of teachers for positions of educational supervision.
- Follow-up educational supervision in the field to determine the level of performance in schools and work to raise levels of curriculum implementation and student performance.

Supervision has become a systems lever to lift the quality of schooling in all schools across Oman. Prior to 2003, the previous lever of school inspection involved judging rather than growing capability in teaching and learning. The switch appears to have been successful, at least in theory among system leaders and in terms of teachers and school leaders generally valuing the support they receive from supervisors. The positions and work expectations of supervisors are structured and located according to level and type.

Supervision has become a systems lever to lift the quality of schooling in all schools across Oman.

There is a Chief Supervisor for each school subject based at the Ministry of Education in Oman. The Chief Supervisor for each subject monitors the work of 11 Senior Supervisors each of whom is allocated responsibilities for a particular governorate and is responsible for up to 21 technical supervisors.

The Senior Supervisor is responsible for supervising the Supervisors, including participating in human resource management for their schools, such as recruitment, professional development, and staff transfers. The Senior Supervisor is also responsible for putting in place actions in response to correspondence received; preparing and supervising examinations and curriculum implementation in their region; and seeking to raise the efficiency and effectiveness of the system (Directorate General of Human Resources Development: Supervision Department, 2012).

In general terms and located at governorate level, subject supervisors have academic subject responsibilities. They are charged with developing the quality of teaching through monitoring teachers of the specific subject they are responsible for, and providing or recommending training to improve their teaching knowledge and skills in the subject concerned.

As noted by the Cambridge Report (2013), technical supervisors, in their role of monitoring the effectiveness of specific subjects, visit their schools frequently. It is reported that teachers value the support provided, particularly the feedback from lesson observations and extended conversations with their subject supervisors. Also noted, however, is that the enhanced role of senior teachers in the monitoring and support of teachers, a devolvement intended to encourage school level responsibility for effective curriculum delivery and successful student learning (Ministry of Education 2006, p.121), has meant an increased frequency of teacher observations.

Within the Human Resources Development Directorate is a central Educational Supervision Department. This Educational Supervision Department sits alongside the School Performance Development Department. Both of these departments provide support to grow more effective schools across Oman. The Supervision Department has specific responsibilities to support supervisors, follow-up regional supervisory developments, collate and analyse student performance data and, support teachers to grow professionally and deal with curriculum delivery obstacles efficiently. The Educational Supervision Department is connected with Supervision Departments in each of the 11 Governorates across Oman. Each Department has senior supervisors who are responsible for supervising the

supervisors, and participating in human resource management for their schools, recruitment, professional development, and transfers of staff (Directorate General of HRD: Supervision Department 2012). The senior supervisor is also responsible for; putting in place actions in response to correspondence received, preparing and supervising examinations and curriculum implementation in their region, and seeking to raise efficiency and effectiveness of the system.

Subject supervisors from governorate offices have academic subject responsibilities to develop the quality of teaching within schools. These are specialist roles and there are different supervisors for each subject area. Supervisors conduct regular visits to schools to supervise teachers within their subject expertise. All mathematics teachers are supervised by mathematics supervisors, as are science teachers by science supervisors and so on. Priority supervision tasks include observing lessons, having extended professional conversations with teachers and recommending training to grow content knowledge and pedagogical skills. A recent development has been for technical supervisors to connect with senior teachers (Cambridge University unpublished report, 2013). In these situations, teachers are receiving professional supervision from on-site senior teachers and off-site subject supervisors. There is a growing trend for the senior teachers and subject supervisors to work together to support teachers.

Subject supervisors are starting to think about using student performance data in their supervisory discussions with teachers. This was noted by the Consortium to be occurring with supervisors of English teachers. Senior supervisor of English at the Department of Human Resources outlined how some initial training has energised many English supervisors to start using evidence informed conversations with English teachers. The senior supervisors agreed the energy has created a movement among many English supervisors and the senior teachers and teachers in schools to use student performance data, but cautioned that the developments are more about growing conceptual understanding at this stage rather than an everyday practice in schools. Furthermore, it was noted there are some English supervisors that need considerable support in basic supervision prior to them taking on more sophisticated evidence informed practices.

Supervisors of English teachers referring to student performance data in their supervision with teachers appears to be a catalyst for all subject supervisors to follow suit over time. However, a transfer of that thinking for all subject supervisors is in the early stages of development. The Cambridge University investigation in 2013 found no evidence to date from these efforts of a positive impact on subject supervisors overall (Ibid). It would appear, therefore, that outside of the more advanced supervision arrangements for English teachers, conversations between subject supervisors and teachers, in the main, focus on subject content and pedagogy and do not necessarily link to the impact of teacher practice on student outcomes.

8.2.2 System Awareness of Issues and Challenges

The key issue considered in relation to classroom effectiveness is the extent to which system leaders can adjust the extensive resources associated with their key lever of the supervision approach to move from outputs focused transfers of knowledge to outcomes focused supervisory practices. The former tends to deal with knowledge in rule bound transmission between supervisors and teachers. The latter mobilises knowledge through collaborative arrangements and the professional conversations as a matter of course to impact on student performance. A Consortium summary note after the Evaluation Team phase 2 schools visits helps explain how a rule bound culture of supervision survives, even though demand appears to be growing for change:

> Many of the school responses were made in relation to a centralised system. This point became clear in relation to discussion about the role of supervisors coming into schools to support teachers. Teachers considered supervisors are coming to ensure the rules are followed. Some teachers and students want to change, particularly into collaborative learning. Are supervisors blocking change by sticking to rules? Or are the schools remaining compliant to stick to the rules? Supervisors are not constrained by policy; the supervisor situation appears very supply driven demand/desire for improvement from within schools is constrained. (Notes from de-brief meeting of International & Omani members of the Evaluation Project Team after school visits).

Raising this issue does not deny the value of rule-bound outputs focused supervision. The Consortium acknowledges that this form of supervision has been extremely useful in creating order and organisation in teaching and learning. However, as the Oman system matures, teachers and leaders need to build on that order and organisation and grow other capabilities, such as evaluative capability and creating strong connections to families and communities. The issue of moving from outputs to outcomes is closely aligned with the routine-adaptive practice matter discussed in Chapter 9 School Culture.

Part of the shift from an outputs to an outcomes focused supervision arrangement is getting groups of teachers learning and changing together. Currently, outside of the examples noted with the English supervisors, the supervision approach appears to the Consortium to be generally focused on the professional growth of individuals more than on that of groups of teachers. This approach favours a hierarchy of 'expert' support to individuals, whereas contemporary networked approaches to supervision promotes the growth and development of professional communities of practice and reciprocal learning (Annan & Ryba, 2013). This latter form of connected, multi-layer supervision appears to be emerging with English supervisors in Oman. A systemic shift reflecting the direction in which English supervisors are moving suggests that science supervisors, for instance, work with groups of science teachers with teachers learning with one another and from the supervisor while, simultaneously the supervisor learns from the teachers.

Some awareness	There is some systemic awareness of the need to shift from outputs focused supervision practices to outcomes focused supervisory practices. The awareness though appears to be occurring organically and not through top down decrees and guidelines.

Supervisors of English teachers have already started to move towards outcomes focused practice. That development has been an organic one, grown from the ground up rather than through system leaders formulating agreed guidelines and decrees. Key informant interviews in the Ministry of Education indicated that system leaders are not yet in agreement about the need to head towards outcomes focused supervision. Some leaders remain convinced that effective supervision is about curriculum completion by the end of the school year, despite what was or was not learned. Given these competing theories among system leaders, it is not surprising that an organic approach to spread outcomes-focused supervision has sprouted from one part of the system, i.e. English language supervisors.

8.2.3 System Responses

System leaders have allowed organic adaptations of supervision led by the English supervisors, indicating that the developments fit within the existing regulatory framework for supervision. It would appear that system leaders concur with the new model as the Ministry of Education's 8th Five Year Strategic Plan (2011-2015) also points toward outcomes focused supervision practices among all supervisors (Ministry of Education, 2010c).

The table below outlines the ratings for the system response.

Output focused supervision to outcomes focused supervision		
Response rating		
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

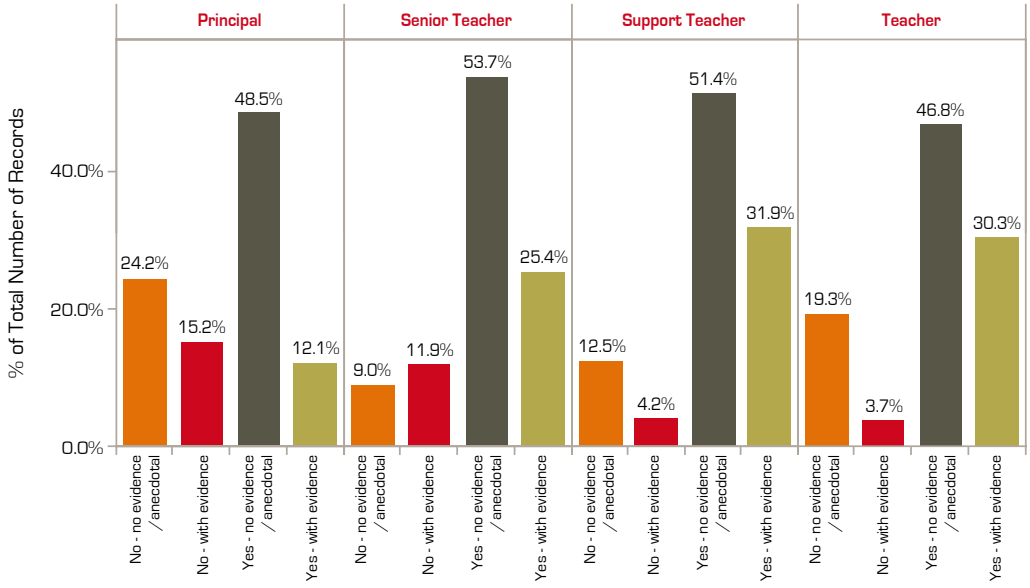
Response rating – appropriate response

The slow organic response to shift supervision practice from an outputs focus to an outcomes focus is rated appropriate for two reasons.

The first reason is that the status quo arrangements, that many teaching professionals in Oman value, have created a useful foundation for continuing growth. Outputs focused, rule bound supervision has been extremely useful to date, creating a useful learning infrastructure between the Ministry of Education, Governorates and schools. It successfully transfers subject content knowledge, useful pedagogies and leadership and management strategies to grow effective schools. It is not a matter of replacing an old system with a new one, rather building on useful elements of the old system. Identifying and agreeing on which elements must be retained and their relationship with new practices will involve continuing dialogue amongst all involved. The organic approach provides time and space for that analysis to be completed.

The second reason for an appropriate rating is that the current supervision model is highly valued by teaching professionals even though it engages in and maintains rule-bound practice. Cambridge University found technical supervision to be universally valued by nearly all teachers in all subjects (University of Cambridge, 2013). School interview data from the Evaluation Project verified the high value placed by teachers on technical supervisors. However, there was some variation between the value teachers gave to the services in general and that of other related professional roles within schools. The graphs below indicate that 70-80% of principals, senior teachers, support teachers and teachers considered technical supervisors had a good understanding of their professional practice.

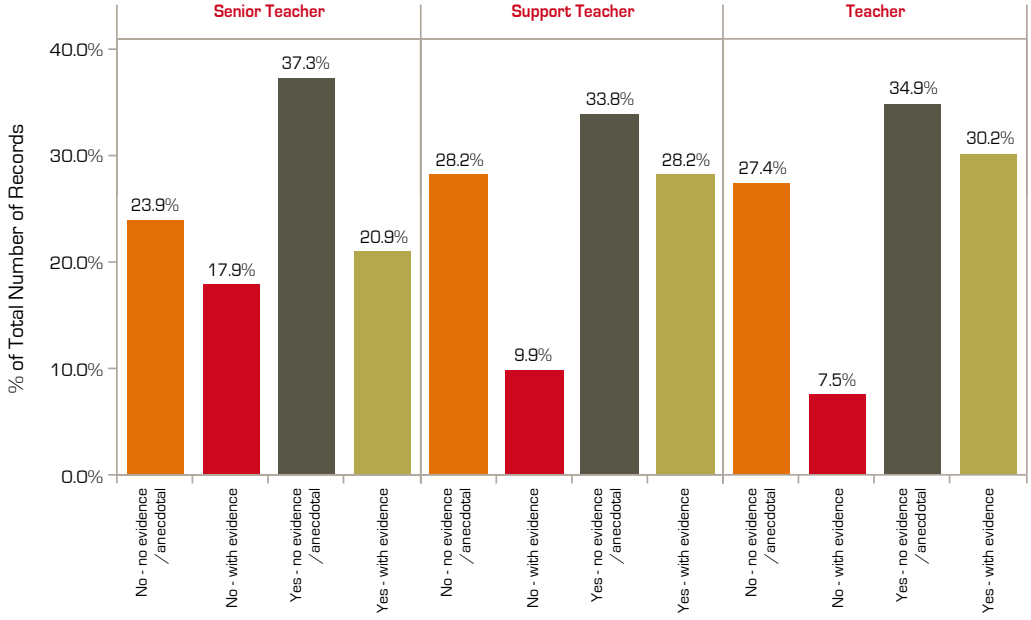
Graph 8.8 **Do you think Subject Supervisors have a good understanding of your teaching practice?**



Source: Evaluation Project survey data 2013

This next graph shows a slightly different picture in terms of adding value to teaching practice. These patterns indicate more of a 50-60% positive rating. One main reason for the lower ratings here is that these teaching professionals believe that technical supervisors do not tend to be in school long enough to add value to their teaching practice. They were considered to have the time to understand the practice but not to follow-through sufficiently to improve it.

Graph 8.9 **Do the subject supervisors add value to your teaching practice?**

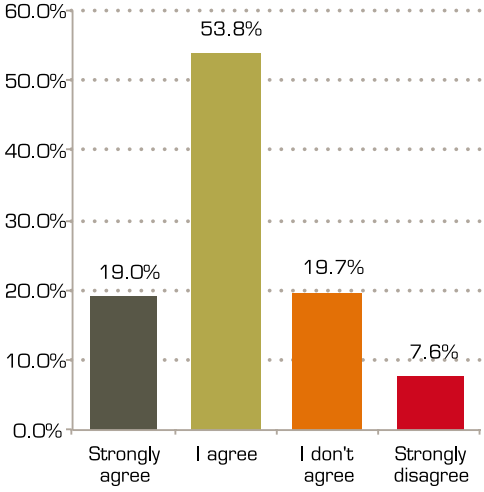


Source: Evaluation Project survey data 2013

The next set of graphs focuses on teachers' views about technical supervision without the views of principals, senior teachers and support teachers. These rating are more in line with the Cambridge University findings and are in the vicinity of 70-85 percent appreciation of technical supervision support.

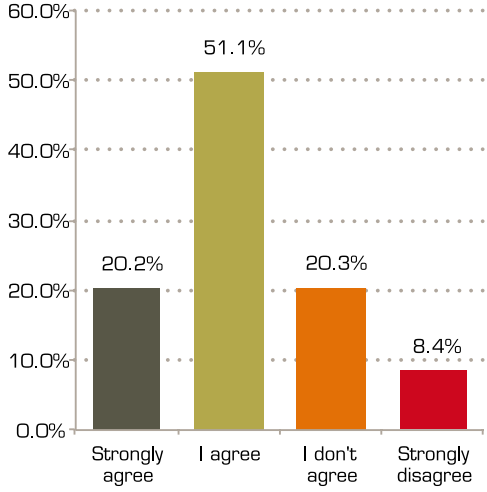
Graph 8.10a

My subject supervisor's evaluations of my classroom lessons are a good assessment of my teaching practices



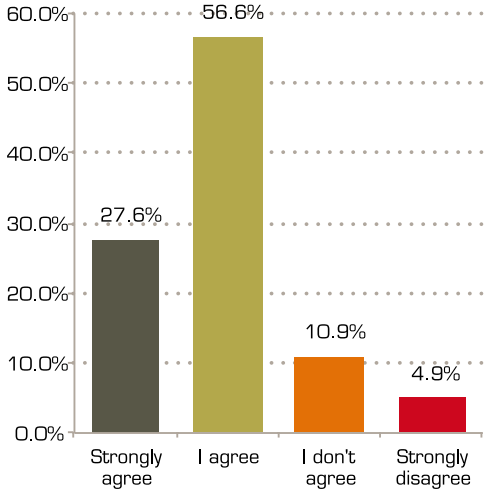
Graph 8.10b

Over the last year my subject supervisor has helped me to improve my teaching skills



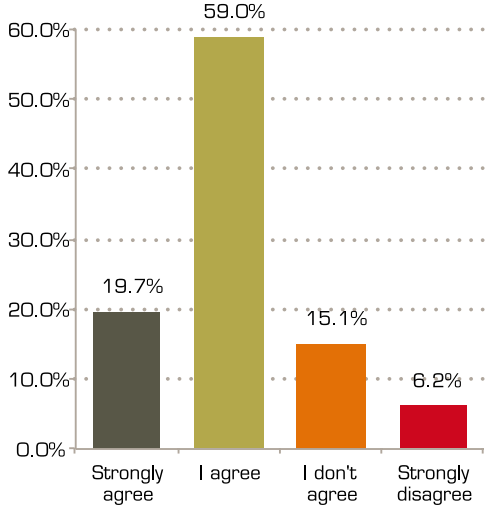
Graph 8.10c

The feedback I receive from my subject supervisor visits is valuable



Graph 8.10d

Subject supervisors have a good understanding of the actual teaching practices occuring in my school



Source: Evaluation Project survey data 2013

Overall, these results from the Evaluation Project surveys and the Cambridge University investigation provide evidence that teaching professionals within Oman schools value supervision services as they are.

In summary, it is understandable that an organic approach is being used to advance supervision toward outcomes focused practice as many teachers still value the rule bound nature of most current supervision practice.

Effectiveness rating; likely to be effective

The organic approach is rated as 'likely to be effective' because system leaders are playing a slow game of change that is likely to lead to a more effective supervision arrangement than rushing change in this regard.

The process of creating more effective supervision arrangement in the near future is to some extent already being managed. A fully effective response might involve system leaders taking useful elements from the organic approach into systems level strategic planning. This would support the spread of outcomes focused supervision in a more systemic way. The Ministry of Education's 8th Five Year Strategic Plan (2011 – 2015) in the section: "Analysis of the current performance of the Directorate General of Education Evaluation" (Ministry of Education, 2010c) indicates that supervision systems are being created to support the growth of supervision. It states an expectation in the future of coordination with the Educational Supervision Department to *"include the follow up of learning achievement within class visit components for the senior teacher and supervisor"*.

Activation of that planning will complement the organic development led by English supervisors. The University of Cambridge report (2013) would suggest that there has been no system-wide activation of that planning to date. However, if these planned developments are implemented, it is a positive step towards a more outcomes focused supervision model in Oman.

Efficiency rating; mixed efficiencies

There is some inefficiency in relying too heavily on an organic approach to change supervision arrangements. The Cambridge University report (2013) indicates that there is a need to sort out who does what in terms of supervisory support to teachers. Ministry supervisors are replicating the role and functions of the regional supervisors and now the senior teachers are also fulfilling a supervisory function. It would appear that all three of these forms of supervision do not have agreed criteria to assess the quality of teaching and learning. In a fully efficient arrangement, agreed criteria to supervise teaching and learning would be developed with the Ministry and governorate supervisors and the senior teachers. Furthermore, technical supervisors would communicate with administration supervisors to ensure criteria for supervising teachers was in line with criteria to supervise school leaders.

Conclusion

Oman's supervision arrangements remains rule bound and outputs focused around teaching and learning. There are signs of an organic movement towards outcomes focused supervision and system leaders are supporting that movement through goals in their strategic plan. The shift from outputs focused to outcomes focused supervision is being handled carefully by system leaders, most probably because of the high value teaching professionals place on existing arrangements. Advancing current supervision arrangements whereby teachers, senior teachers and principals routinely check the impact of their teaching and leadership practices on student performance represents a step forward. Inclusion of students and families in that routine would further enhance the supervisory environment.

8.3 Professional Development and New Teacher Support

8.3.1 How the system works

Professional Development

Teachers have opportunities to attend in-school professional development, subject specific professional development in Regional Training Centres as well as opportunities to increase their qualifications through tertiary courses at Sultan Qaboos University.

The Ministry's Human Resources Development Directorate organise in-service short courses. It has used a cascade organisational model for in-service training. This has involved identifying trainers situated in all regions of the country, training them centrally, and then instructing them to return to their regions to replicate the training programmes with all teachers, principals, and subject supervisors. (Ministry of Education 2006, p. 89). In 2012 the Ministry's Evaluating Training Impact Department published the Studies on ROI of Professional Development Programs (2012). This document set out to measure the return on investment from the Ministry's training programme through an analysis of six case studies. This was a first attempt to conduct cost-benefit analyses of professional development programmes. It proved worthwhile as two of six programmes were judged to have considerable monetary value.

The Ministry of Education also provides extensive support for teachers to upgrade their qualifications. The 8th Five Year Strategic Plan (2011-2015) Human Resource Development section, Goal 2, sets out some specific training targets including:

- (90) Bachelor degree on educational administration annually at Sultan Qaboos University.
- (40) Educational administration diploma annually at Sultan Qaboos University.
- (30) Professional guidance diploma annually at Sultan Qaboos University.
- More than (3000) employees were given approval to study in open enrolment programmes. (Ministry of Education, 2010c).

A number of schools are effectively operating as training units and meet many of their teachers' learning needs. Systematic in-school training and organisation is achieved in many schools by arranging the timetable so that all the subject staff are together for two periods a week. Senior teachers prepare professional development plans, which are signed off by the principal to ensure staff are up to date with

curriculum content and pedagogy. There is also an expectation that teachers and senior teachers use training portfolios to enable them to embark on a continuous professional development programme. The purpose of these training portfolios is to help increase collaboration and cooperation between practitioners in order to improve overall performance (Ministry of Education, 2006, p.93).

New Teacher Training and Support

Since Teachers Training Colleges were closed in 2006, almost all new teacher training in Oman has been delivered through Sultan Qaboos University. Information about the Sultan Qaboos University training is outlined in the table below:

Teacher Academic Education Programme at Sultan Qaboos University

In all cases the first year is a foundation course, a mandatory introduction for study. The programme qualifies students in English language, mathematics, information technology, and study and learning skills, with the aim of establishing the foundations of university study. A student may fulfil the Foundation Programme requirement by any one of three means; (i) presenting an equivalent qualification, (ii) passing the exit test, or (iii) attending the courses and passing them.

The Bachelor of Education degree is a 5-year programme with 125 credits. The timeframe can be reduced as there is a summer semester, but attendance is restricted to these who have achieved good grades with extra credits. Trainees have a range of majors to choose from; Arabic, Art Education, Early Education: Childhood, Educational Administration, English Language, Geography, History, Instructional and Teaching Technologies, Islamic Education, Physical Education, Biology, Chemistry, Mathematics and Physics. Programme requirements at Sultan Qaboos University also include courses in Islam, Omani society and civilization.

All courses have a similar breakdown in structure. A large percentage of early semesters concentrate on subject knowledge. Teaching theory and techniques and subject-based curriculum (i.e. what to teach) appear more in mid-course semesters. A teaching practice course also appears at that time. One course on instructional and learning techniques is focused on the using and teaching Information Technology and there are specialist courses for E-learning strategies, distance learning and the use of the internet. The whole of the final semester is devoted to teaching practice.

New teacher training and support in Oman has on-going challenges. This is a global phenomenon rather than an Oman-specific one. There are challenges in new teaching training and support at every level in the system. At the centre, the challenges centre on strategic planning. In the Human Resources Department section (Goals 3 and 4) of the Ministry's 8th Five Year Strategic Plan 2011-2015, a number of challenges are identified about new teacher training and support. They include poor planning by the Ministry of Education to identify the quantity and quality needs of qualification programmes, and not activating the outcomes and recommendations of various studies relevant to improvement of teacher training programmes (Ministry of Education, 2010c, p.16.).

At the provider level of the system, the challenges are about supporting new teachers into practical application of what they have learned in theory. The Cambridge University report (2013) observed that current teacher training is overly theoretical in nature, with insufficient practicum experience in schools. An earlier Ministry report indicated that when new teachers do get opportunities to practice, many were unwilling to accept critical feedback from mentor teachers, senior teachers or supervisors

(Ministry of Education, 2006, p. 93). The Ministry report noted that this area of professional support for new teachers is one that needs to be resolved as a priority. Comments in the Cambridge University report suggest that situation may not have changed for the better.

At the bottom end of the system, the challenges continue. Many newly graduated teachers are placed in schools far away from their home regions. They are often placed in the most remote regions requiring a good deal of travelling on the weekends, between their school area and home. In some regions, the challenge is almost universal to the entire teacher population. For example in Al Wusta, the average age of teachers is 32.2 years and the average years of experience of these teachers is 2.4 years. That example suggests that there is a constant turnover of young teachers in the Al Wusta region. Pro-active efforts to support new teachers in another remote region, Al Sharqiyah North, involve running mini buses from Batinah, two hours each way every day, to transport teachers to and from their home to their place of work. Average age and years of experience of teachers in that region are 32.3 years and 4.8 years respectively.

8.3.2 System Awareness of Issues and Challenges

The Ministry shows a good understanding of the need to raise the professional capability of its teaching workforce and it shows good recognition of the challenges posed by a:

- Widely distributed workforce with significant numbers in remote areas
- Limited ability to use Internet or technology solutions for on job teacher training
- A relatively new and limited regional training infrastructure.

The 8th Five Year Strategic Plan (2011-2015) Human Resources Department section identified a number of these factors as issues in providing professional development for teachers. The Strategic Plan noted that training centres had limited computer devices and poor Internet network availability and as well there was a lack of technical and administrative expertise in the main training centre. (Ministry of Education, 2010c, p.20). These issues impacted on the ability to define individual training needs and the ability to evaluate the impact of training on student performance once it has occurred.

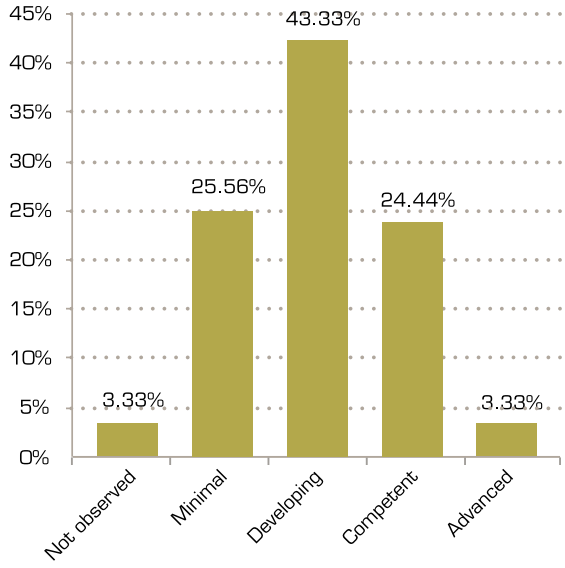
Fully aware	There is a very strong system awareness of the need to raise the professional capability of the teaching workforce and the issues and challenges faced in achieving this.

The Ministry is also aware that it has made limited gains in achieving its desired shift across schools from a teacher centred approach to a student centred approach. For example, the University of Cambridge Report (2013) noted its concerns in this area and suggested a review of all professional development policies and strategies be undertaken to ensure alignment with the intention to move to student-centred learning (2013, p.21.).

Evaluation Project classroom observations of teaching practice supported these system identified concerns. For example, the Evaluation Project found that around 70% of teachers demonstrated minimal to developing scores for 'engaging and challenging students in active learning' and 'encouraging students to think creatively' in the 90 classroom observations conducted.

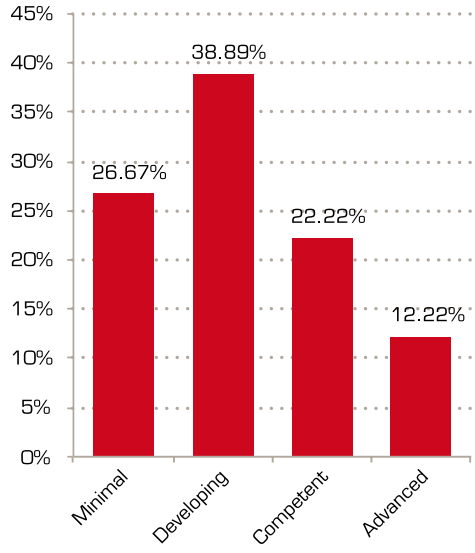
Graph 8.11

Engages and challenges students in active learning



Graph 8.12

Encourages students to think creatively and critically



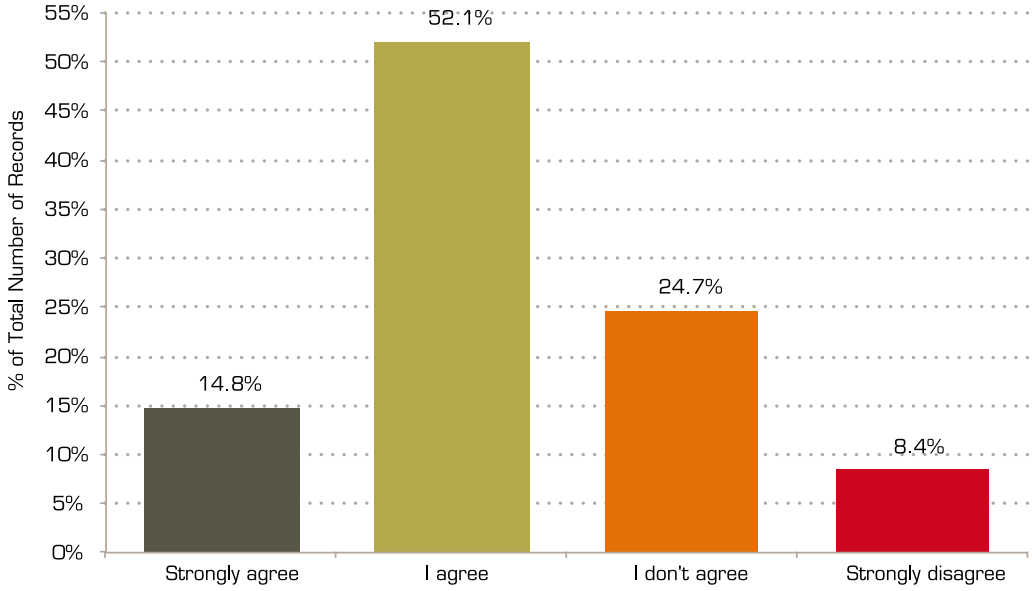
Source: Evaluation Project classroom observations 2013

Evaluation Project Team discussions with school leaders and teachers found a strong demand for the opportunity to learn, discuss and review their teaching and learning methodologies but also the concern that they are not being given appropriate support to do so: *"We ask the Directorate for tailored professional development programmes but they do not provide them. The principal acknowledged that they need to move into more creative learning but they do not have the support to do so"* (Post Basic Boys School).

On the other hand the Evaluation Project online survey results demonstrated that there was a reasonably high level of satisfaction from teachers with a number of aspects of the current professional development opportunities. For example, 67% of teachers agreed or strongly agreed that school based professional development provided them with the knowledge and skills they require.

67% of teachers agreed or strongly agreed that school based professional development provided them with the knowledge and skills they require.

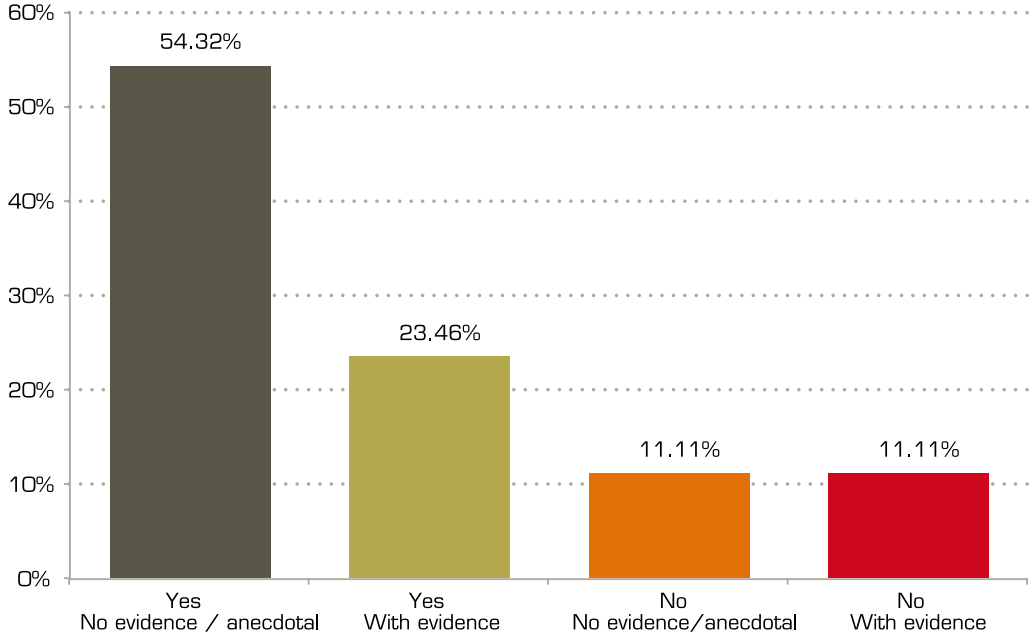
Graph 8.13 **Professional learning opportunities at my school provide me with the knowledge and skills needed to teach effectively**



Source: Evaluation Project survey data 2013

For those teachers who had experienced curriculum professional development, 78% agreed that it was relevant and had enhanced their teaching programme.

Graph 8.14 **Was the Curriculum/Subject PD relevant and did it add value to your teaching practice?**



Source: Evaluation Project survey data 2013

From the data collected during the school visits teachers assessed their professional development as generally being curriculum focussed and highly relevant to their teaching practice.

8.3.3 System Responses

There are a number of major system responses underway that will have a significant impact on building the professional capability of the teaching workforce.

The responses include the following initiatives:

- Specialised Centre for Teacher Training to provide appropriate in-service training/education.
- Professional standards that will set out job roles, expectations and ethics.
- Education Law that will allow the Ministry to create career pathways, reward and manage teacher performance among other things.
- National Assessment Centre to provide the tools and regional and national data to support professional assessment practices.
- Curriculum standards project.

The Specialised Centre for Teacher Training is at the heart of these responses to lifting professional capability. In early 2013, the Ministry released the tender document, Academy for education professionals; Phase four- Operations request for proposals. This document sets out the rationale of the new Academy (now known as the Specialised Centre for Teacher Training) as:

> Considerable strengthening of the professional development for all teachers and regional staff is required if the planned reforms are to be implemented effectively, consistently and sustainably across schools. (Ministry of Education, 2013b, p.2).

The document sets the first goal of this academy to:

> Develop highly skilled, confident and motivated educators by providing sustained, intensive, accredited professional development (Ibid).

Raising the professional capability of the teaching workforce		
Appropriateness	**Effectiveness rating**	**Efficiency rating**
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

Response rating: appropriate response

The five initiatives are very important and appropriate system responses. The responses have individually been well developed and designed and agreed after national and international reviews and considerations.

Effectiveness rating: likely to be effective

Individually the five initiatives are likely to be effective in raising the professional capability of the teaching workforce.

The Consortium notes that the five initiatives are likely to be more effective if they are treated as a coherent whole strategy to raise teacher professional capability. There are some very important interdependencies across these five initiatives and that will need to be carefully monitored and managed to achieve the full potential of the initiatives.

For example, there is a very strong interdependency between the Specialised Centre for Teacher Training, Curriculum standards project and Education Law. Over time the training centre will give teachers the skills, confidence and desire to trail and adopt new teaching and methodologies in their classrooms. The Oman curriculum must provide the opportunity and flexibility for these teachers to practice their new knowledge and skills in the classroom. The Education Law will provide the opportunity and requirement for the Ministry to implement a performance management system for teachers. This performance management system must also provide the opportunity and expectation that teachers will adopt new teaching practices without concerns that these new methods will impact on their performance ratings.

These interdependencies will not accidently fall into place to provide a coherent system without strong and robust programme management being implemented across the five initiatives from the highest levels of system leadership.

In order that the 'likely to be effective' rating is actually achieved it is strongly recommended that a programme management office is immediately implemented across these five initiatives.

Efficiency rating: efficient

The Consortium concludes that there is a strong potential for these five initiatives to be an efficient response to the challenge of raising the professional capacity of the teaching workforce. Collectively these initiatives constitute a very significant investment of financial and human resource.

The rating of efficient is made on the following assumptions:

- The five initiatives will be implemented as a single programme of work focused on raising the professional capability of the teaching workforce.
- Current mechanisms to raise the professional capability of the teaching workforce will be progressively combined into this programme of work, so that there is a single combined strategy being implemented across the system.
- Implementation progress and interdependencies between these initiatives will be closely monitored and managed on a regular (at least quarterly) at the highest levels of system leadership.
- Any new initiatives in this area will be considered against the goal of this programme of work and if approved will also come under the same single programme.

If these assumptions are not correct or are not implemented then the appropriate rating for these system response is at best 'unknown' or at worst likely to be 'not efficient'.

The five initiatives to maximize teacher impact on student learning have the potential to avoid an already busy project environment, which is likely to lead to more efficient investment decisions. However, competing responsibilities and/or theories among system leaders about nature, scope and function of these five initiatives is something that will lead to inefficiencies if they are simply rolled out individually with an expectation that they represent a coherent and comprehensive solution.

There is a need for the various parties to engage in debates and settle any differences for strategy coherence to emerge. Coherence is unlikely to be achieved without that important step. It is about uncovering beliefs, all parties coming to understand one another's beliefs and changing beliefs based on what is best for student learning. These sense making processes may seem like inefficiencies that will get in the way of sustaining Oman's reputation for rapid development. However in this particular area of development, careful attention to change beliefs is critical to creating efficiencies.

One final point here is that the one party that is critically important to create efficiencies is the teachers themselves. If the five strategies are 'done with' teachers, then teachers' beliefs and practices are likely to change much faster than if they are 'done to' teachers. If teachers start analyzing data sets about their own belief and practices and engaging in theory debates with one another about next steps, then teachers are likely to become the drivers of change for their own profession. There is a simple intervention strategy that will generate efficiencies if applied in relation to maximizing teacher impact; give the teachers the nub of an idea and let them generate energy around it (Fullan, 2013). In this case, the nub of an idea is about analyzing data sets to generate new and better ways of lifting student learning.

Conclusion

The need to lift the capability and professionalism of the existing Oman teaching force and newly graduated teachers is well recognised within the system, and an appropriate matrix response of five key initiatives are in place to address the issues raised. However, in order to maximise the effectiveness and efficiency of the system responses, a coordinated and coherent approach is needed to ensure a systemic improvement in teaching capability. Principals and teachers are willing participants of professional development, and it is recommended that professional development actions utilise this motivation to include school staff in dialogue about teacher development needs, which will also raise self awareness of teaching practices, and 'buy-in' to the new professional development initiatives.

8.4 Teacher Workload

8.4.1 How the system works

Teacher workload is influenced by a number of factors including the number of assigned teaching lessons, number of assigned classes, class sizes and administrative duties. The direct teaching load sits alongside a mix of non-direct teaching responsibilities that are part of being an effective teacher. A student-learning week consists of five days with up to eight lessons taught per day, creating a possible per week total of 40 lessons (each lesson 40 minutes in length). Within that framework, teachers are asked to: teach a certain number of lessons, prepare for these lessons, mark follow-up work, undertake substitution classes as required for absent teachers, attend to administrative duties, attend meetings, and undertake professional development opportunities.

Allocation of weekly teaching lessons

The Education Planning section of the Planning and Needs Department is responsible for several key functions relating to the distribution of weekly teaching lessons to teachers. These functions include:

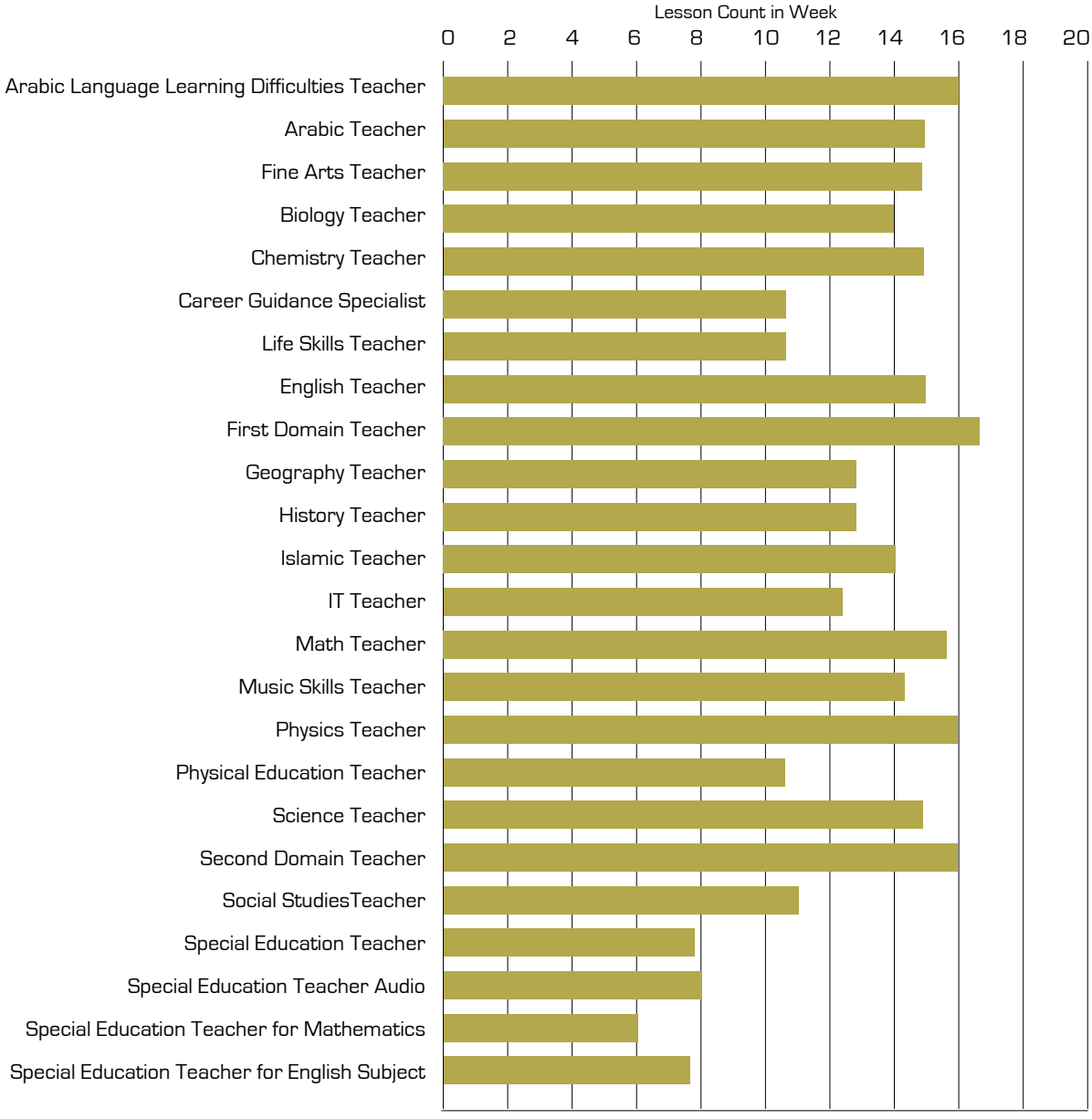
- Preparation of school staffing requirements in conjunction other Ministry Departments and Governorates.
- Decision on staff transfer requests.
- Organising and monitoring staff transfers.
- Preparation and monitoring of education indicators.
- Monitoring staff utilisation.

However, a range of system settings already in place impacts the actual teaching lessons assigned to each teacher. These system settings include:

- The number of lessons assigned to each subject per week (set centrally in the Curriculum Study Plans). The number of assigned lessons per subject per week can vary from one to seven.
- Teacher subject specialisation. The vast majority of Cycle 2 and Post Basic teachers have been trained and certificated to teach only one subject. This limits flexibility in allocating teachers to schools and setting school timetables.
- The number of classrooms available per school. This impacts on the number of students in classes as well as the possible number of lessons that can be delivered in a school (e.g. a school with 10 classrooms can have a maximum of 400 lessons delivered per week - 10 classes x 40 lessons a week).
- Guidelines on the average number of lessons to be assigned per teacher.
- The number of students in the school.

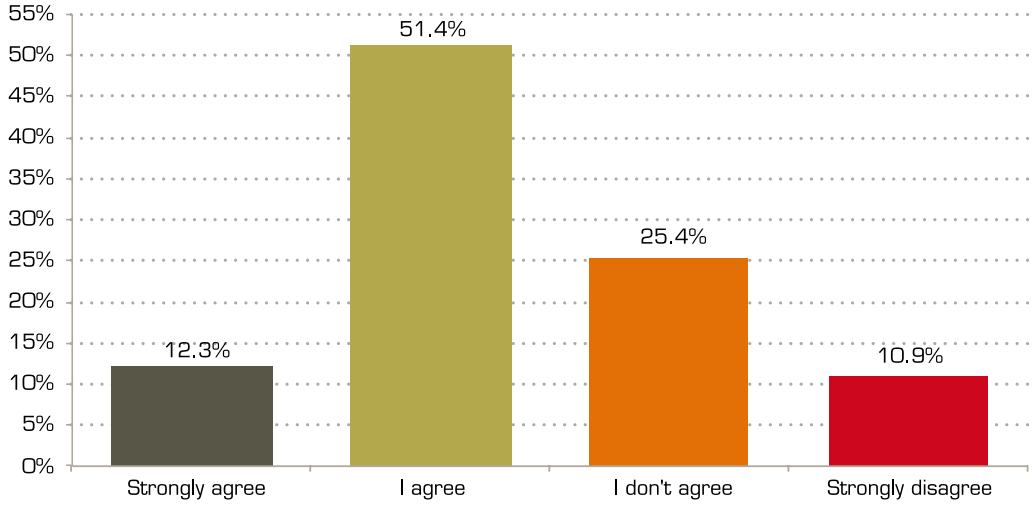
The combination of these setting has a significant impact on the number of lessons that can or need to be assigned to each teacher at any one school. These system settings create significant variations in assigned teaching times across teachers within schools and across schools and regions.

Graph 8.15 Average lesson count per week across job titles (excluding senior teachers) for 2012/2013



Evaluation Project Team data from Phase 3 school visits indicated tensions around the variance in teacher workloads. In relation to the statement: "My workload is manageable", 25% disagreed and 11% percent strongly disagreed. These are strong messages of discontent from one-third of a teacher workforce.

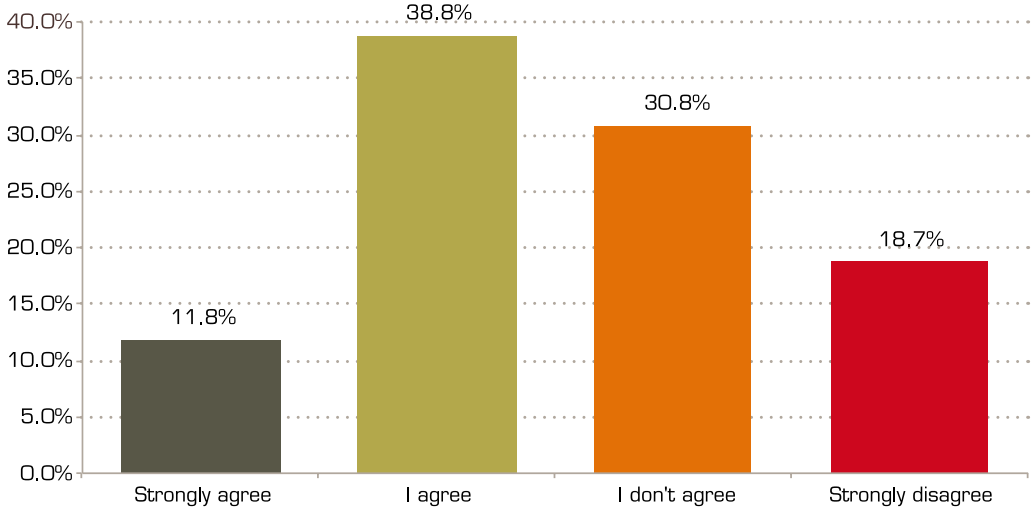
Graph 8.16 My workload is manageable



Source: Evaluation Project survey data 2013

The same situation occurred in response to the statement: "The workload in my school is fairly distributed", 57% of respondents agreed/strongly agreed and 43% disagreed/strongly disagreed. This response is getting close to a 50-50 split in terms fair-unfair distribution of workload.

Graph 8.17 The workload in my school is fairly distributed across staff



Source: Evaluation Project survey data 2013

Analysis of average teaching time for Oman teachers in the table below shows that the average Oman assigned teaching time is significantly lower than OECD countries. (OECD data on teaching time and student contact time is used because it provides the most comprehensive full data sets currently available). The average teaching time assigned to Omani teachers is lower at both the primary as well as upper secondary (Post-Basic) 411 hours per year in comparison to 790 hours for primary and 664 hours for upper secondary. Different countries have different additional roles for teachers (beyond actual teaching time) but allocated teaching time is still a useful comparator of system performance.

Table 8.2 OECD comparative table for teaching time and number of periods at primary (Cycle 1) and upper secondary (Post Basic).

Country	Net time in hours teachers spend teaching per year		Average number of 40 minute periods teachers spend teaching per week		Average time in hours teachers spend teaching per day	
	Primary education (Cycle 1)	Upper secondary education (Post Basic)	Primary education (Cycle 1)	Upper secondary education (Post Basic)	Primary education (Cycle 1)	Upper secondary education (Post Basic)
Australia	873	802	33	30	4.4	4.1
Canada	799	747	33	31	4.4	4.1
Chile	1,120	1,120	44	44	6.2	6.2
England	684	695	27	27	3.6	3.7
Finland	680	553	27	22	3.6	2.9
Germany	804	715	31	27	4.2	3.7
Hungary	604	604	24	24	3.3	3.3
Ireland	915	735	38	33	5.0	4.4
Japan	731	510	27	20	3.7	2.6
Korea	812	609	30	23	3.7	2.8
New Zealand	935	760	36	30	4.8	4.0
Norway	741	523	29	21	3.9	2.8
Oman*	411	411	20	20	2.7	2.7
Spain	880	693	36	29	5.0	4.1
United States	1,097	1,051	46	44	6.1	5.8
OECD average	790	664	31	27	4.3	3.6

Source: 2011 OECD data

* Oman averages are based on the 2012/2013 Ministry of Education Planning Directorate guidelines of 20 periods per week. Calculations based on teacher timetable data from the E-portal indicate that the average teaching time is 14 periods a week. Based on available data the Consortium estimates that the average periods per week are likely to be in the range of 14 to 20 periods per week.

As noted early there is a wide range variation in the number of lessons assigned per week. The following graph shows the number of teachers assigned across a range of different lesson allocations.

- Lessons per week frequency excluding senior teachers.
- Avg Lesson Count Cycle 2 only.

Table 8.3 Average annual and daily teaching times across a range of weekly lesson allocations

	Net time in hours teachers spend teaching per year		Average time in hours teachers spend teaching per day	
Category	Primary education	Upper secondary education	Primary education	Upper secondary education
Oman teacher with 5 lessons per week	103	103	0.7	0.7
Oman teacher with 10 lessons per week	205	205	1.3	1.3
Oman teacher with 15 lessons per week	308	308	2.0	2.0
Oman teacher with 20 lessons per week	411	410	2.7	2.7
Oman teacher with 25 lessons per week	513	513	3.3	3.3
Oman teacher with 30 lessons per week	616	616	4.0	4.0
OECD Average	790	664	4.3	3.6

Class size

Class size has an impact on teacher workload. Part of a teacher's role is to mark individual students work and provide feedback to each student and their parents.

Oman has a teacher-student ratio of 1 to 10, which is lower than the OECD average of 1 to 13. However, that does not equate to low class sizes in Oman. The average class size in Oman is 26 and the OECD average is 17.

Table 8.4 Average class sizes

	Teacher student ratio	Average Class sizes
OECD average (2011)	13	17
Oman average (2012/2013)	10	26

What these ratios show is that Oman has more teachers in schools per student than the international norm, but lower allocated teaching time per teacher. E-portal statistics show that schools in rural and remote areas of Oman tend to have smaller class sizes compared to these in the larger urban areas.

Table 8.5 Percentage of classes per region in banks of Students per class, 2012/2013

Region Name	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-55
Al Batinah North	0.0%	0.0%	0.1%	1.0%	9.0%	38.6%	41.1%	9.6%	0.5%		
Al Batinah South	0.0%	0.0%	0.1%	2.9%	12.7%	40.9%	36.4%	6.9%			
Al Buraimi	0.1%	0.3%	0.5%	4.0%	7.3%	25.9%	44.2%	17.8%			
Al Dakhliyah	0.1%	0.1%	0.1%	2.8%	12.2%	41.3%	37.3%	6.1%			
Al Dhahirah		0.1%	0.2%	7.6%	20.3%	45.3%	22.9%	3.7%			
Al Sharqiah North	0.1%	0.1%	0.1%	3.4%	15.8%	35.3%	38.3%	6.5%	0.2%	0.1%	0.1%
Al Sharqiah South	0.0%	0.0%	0.2%	5.1%	14.5%	34.3%	33.5%	11.9%	0.5%		
Al Wusta	0.2%	1.4%	2.3%	16.7%	21.6%	21.0%	34.2%	2.6%			
Dhofar	0.2%	0.6%	0.9%	7.9%	16.2%	25.8%	39.4%	8.8%			
Musandam	0.0%	0.1%	0.9%	10.8%	31.0%	49.7%	7.4%				
Muscat	0.0%		0.0%	1.2%	8.1%	29.3%	45.8%	15.1%	0.3%		0.1%

Allocation of classes

The number of classes allocated to a teacher is a factor in assessing the workload of a teacher. For example, as shown in the table below, a teacher assigned four social studies classes at Grade 7 will have the same weekly teaching time but around 20% greater workload compared to a teacher assigned two mathematics classes at Grade 7.

Table 8.6 Classes allocated to a teacher

	Number of classes	Periods per class per week	Total Teaching Time per week (Periods)	Students per classes (Based on Oman average)	Total students taught	Approximate total marking time per week -assuming 5 minutes per student (Periods)	Lesson Preparation time – assuming 15 minutes per lesson (Periods)	Workload – without further duties (Periods)
Teacher assigned four social studies classes at Grade 7	4	4	16	26	104	13	6	35
Teacher assigned two mathematics classes at Grade 7	2	8	16	26	52	7	6	29

Administrative duties

The number of administrative duties of teachers has been reduced over recent years with the Ministry employing an increased number of administrative and technical staff to support teachers in schools. From 2005 the number of administration support staff has increased from 4,114 to 6,786 in 2012. (Ministry of Education, 2012b).

Teachers are still required though to complete a number of administrative duties on a weekly and semester basis. These duties and estimated weekly times are set out in the following table.

Table 8.7 Estimated teacher administrative duties

Administrative Duties	Estimated average time* (Hours per week)
Attending assemblies per week	1.7
Student management duties per week (grounds, canteen, bus)	1.3
Preparation for classroom/activity class	0.3
Activity class	0.7
Follow up from classroom/activity class	0.3
Subject teachers professional development meetings	0.7
Other administration (e-Portal reporting duties, report writing, parent meetings)	0.3
Total administrative duties per week	5.3 hours

* Based on school visit staff and Ministry key informant interviews

Substitution classes

Teachers are required to take additional classes to cover for teaching staff absences at their school. The Evaluation Project endeavoured to identify the size of teacher staff absenteeism and to estimate the impact of substitution classes on average teacher workload.

E-portal data on teacher absenteeism was accessed and analysed. Based on the e-portal data the estimated teacher absenteeism rate of approximately 3% in Oman is considered low by international standards.

Table 8.8 Total number of Teacher Absence by Type, 2012/2013

Vacation Types	Number of Days
Special vacation without salary	55,597
Emergency vacation	26,049
Child care vacation	22,444
The Sultanate Representative vacation	19,314
Study vacation	13,232
Accompany patients vacation	7,902
Accompany husband / wife vacation	4,047
Performance of examinations vacation	1,379
Iddat vacation	107
Grand Total	150,665

Table 8.9 Total regional percentage of teacher absence as a comparison to region size as determined by percentage of all teachers, 2012/2013

Region Name	% of Total Number of Absences	% of Total of All Teachers
Al Batinah North	23.23%	18.25%
Al Batinah South	4.88%	11.14%
Al Buraimi	2.33%	2.30%
Al Dakhliyah	20.96%	14.70%
Al Dhahirah	6.84%	8.61%
Al Sharqiyah North	3.40%	8.96%
Al Sharqiyah South	8.99%	8.61%
Al Wusta	0.41%	0.92%
Dhofar	6.41%	8.96%
Musandum	2.82%	1.95%
Muscat	19.71%	15.61%

Based on the e-Portal data, 150,665 days of teacher absenteeism in 2012/2013, then on average each teacher is absent for 3 days over an academic year. And based on the e-Portal data, each teacher would be providing substitution for absent teachers at the rate of approximately 12 periods a semester or approximately 3 periods over 4 weeks.

The e-Portal data contrast strongly with the estimates of actual substitution occurring as identified by school leaders and teachers on school visits. Estimates provided to the Evaluation Project Team ranged between 2 and 3 periods of substitution classes a week per teacher. This would place the annual teacher absenteeism rate at between 8 and 14%.

A number of possible reasons were offered to the Evaluation Project by school leaders, teachers, and system leaders, on the discrepancy between the e-Portal data and school based estimates. The Consortium makes no finding as to which is the more reliable estimate of annual teacher absenteeism.

The Consortium does though note that it is in everyone's interests, school leaders, teachers and system leaders, to gain robust data on this key performance indicator of the education system.

Without accurate teacher absenteeism data:

- School leaders and teachers will carry a workload burden of high teacher absenteeism without official recognition.
- Negative anecdotal stories of high absenteeism will tarnish the professional credibility of the teaching workforce in the eyes of external stakeholders.
- System leaders will find it difficult to take into account substitution classes when assessing the total actual workload of teachers.
- System leaders and school leaders and teachers will have no evidence base for discussing and resolving the issue.

The Consortium recommends that system leaders create opportunities to analyse and discuss the e-Portal teacher absenteeism data (in conjunction with recommended discussions on student absenteeism data from Chapter 9 School Culture). These discussions will be valuable in identifying mechanisms, at the school, Governorate and Ministry level, for improving the collection of this important system performance data.

8.4.2 System Awareness of Issues and Challenges

The key issue that the education system faces in relation to workload is the wide variation in teacher workload across the teaching workforce. The impact of this wide variation in workload is that the teaching workforce available to the Ministry is currently not being effectively or efficiently utilised.

Some teachers have full or excessive workloads while others have low workloads. Yet most strategies to support teachers tend to treat all teachers as if they have the same workload. Looking at this workload situation as an average is not helpful. It is better to analyse available data sets in relation to the diverse situations that exist.

This situation can be considered a problem or an opportunity. Taking it as an opportunity means approaching the situation with the idea of looking at how the spare capacity within the workforce can be utilised to achieve better outcomes for learners as well as reducing the workload of the parts of the workforce that are over capacity. For any country seeking to lift student performance this can be considered as a good problem to have.

For instance, it would be useful to analyse what teachers with low lesson allocation do with their time in the school day outside of teaching lessons. This could lead to identifying how to maximise the use of that time to lift student learning. For instance, could these teachers be given the responsibility to start building stronger connections between schools, families and communities? Another alternative is to create better connections between schools, welfare and health agencies for students living in challenging circumstances.

There are good examples within Oman and in other countries of teaching staff crossing boundaries from schools into families, communities and organisations concerned with student well-being (see Oman example in Inclusive Education section in Chapter 8, Student Learning). One strategy in New Zealand, for instance, involves teachers and school leaders engaging students and families in an analysis of the students' learning environments. The objective of the exercise is to find the people and the interactions with these people that are supporting the students to overcome aspects of learning that they find hard (http://www.lcn.education.auckland.ac.nz).

A situation analysis of this nature and follow-up development does not necessarily need to involve teachers with high lesson allocation. At the moment, teachers with high lesson allocation have legitimate concerns as the one size fits thinking about teacher development stretches them further and further.

System leaders have a strong awareness of the need to build a professional and credible teaching workforce even though the approach appears to be problem-focused at present. However, the leaders are yet to maximize the use of its current data sets to understand the nuances of teacher effectiveness and ineffectiveness. A logical reason for this lack of use is that infrastructure around data sets about teacher effectiveness are in the early stages of development so usage of the data has only become a recent possibility. The rating for awareness, therefore, is partially aware only because system leaders are yet to start using the data that they now have available to them.

Partially aware	The limited observed use of systems level data on teacher workload, suggests that there is partial awareness of the factors that have contributed to creating wide variations in teacher workload and the impact of this variation.

8.4.3 System Responses

Wide variation in teacher workload across the teaching work force		
Appropriateness	**Effectiveness rating**	**Efficiency rating**
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

The current system response to ensuring a sufficient teaching workforce to meet education demands is to use a centralised, formulaic approach to managing the teaching workforce. There is a disconnect between the policy level of the Ministry of Education using an applied formula of 20 periods per teacher per week, and the school operational level and the actual workload of teachers. Due to this apparent lack of coherence in the system, and the absence of data and information being utilised to inform the system leaders responsible for managing the teaching workforce, the system response of a formulaic teacher allocation rule is assessed as not appropriate.

Analysis of available data shows that there are multiple factors, such as teacher subject specialisation, numbers of students at individual schools, and number of weekly lessons specified per subject, that influence an individual teacher's workload which do not appear to be being taken into account when allocating teachers to schools. There also appears to be a lack of systematic monitoring of teacher workloads once planning allocations have been made, indicating that there is no system feedback that would identify issues and challenges relating to teacher workload.

The large number of teachers in the workforce indicates that at a basic level, supply is meeting the demand for teachers, making the response partially effective in terms of having sufficient numbers of teachers for the number of students in the system.

The relatively high teacher to student ratio, and the low number of teaching hours when compared internationally indicates inefficiency in the system. There are enough teaching staff in the system, however the way that workloads are managed, and equity in the workload across all teachers does not appear to be well understood by system leaders, and there is little central oversight of ways in which principals may be managing workload discrepancies on a school by school basis.

Conclusion

It is recommended that the policy and operational policy for teacher allocation is reviewed. In particular, a greater understanding is needed of the drivers of low or high workloads by the factors identified above. Utilising available data and information to inform system leaders of ways to maximise effectiveness and efficiency from the teaching workforce, which may include diversifying the roles of some teachers with low workloads, providing additional support for subject areas with high teacher workloads, or working with principals to examine ways to ensure more equitable workloads across the teaching workforce will also go some way to correcting the system disconnect.

In developing an appropriate system response however, it is important to build in a feedback loop to monitor teacher workloads, as there are likely to be flow-on effects to the make-up of the education workforce, the level of job satisfaction of teachers, and the effectiveness of education delivery. A formulaic approach could be delivered, however it would need to be more sophisticated than the current teacher allocation rule and incorporate all factors influencing teacher workloads.

8.5 Job Satisfaction

8.5.1 How the system works

Observations and evidence of job satisfaction

Job satisfaction can be qualitatively measured through satisfaction with external and intrinsic factors. The following Herzberg model is globally used to identify key qualitative components of job satisfaction:

Hygiene (External factors)	Motivators (Intrinsic factors)
• Working conditions • Policies and administrative practices • Salary and Benefits • Supervision • Status • Job security • Fellow workers • Personal life	• Recognition • Achievement • Advancement • Growth • Responsibility • Job challenge

Using these measures, the current system provides job satisfaction in regards to job security and fellow workers or team environment. That is, the settings for the public service noted in section 8.1 provide a high level of employment stability, and the on going increase in the number of teachers employed demonstrates a continuing demand for teachers. While the Consortium observed positive relationships in many schools, with positive working relationships, approximately half of the principals and senior teachers noted that staff morale was poor.

In terms of working conditions, interview and survey results have highlighted a mixed level of satisfaction as some teachers felt that they were under-resourced to perform their roles, particularly in regards to IT equipment and facilities. In some instances, teachers were personally funding additional resources for classrooms and the school. A higher level of job satisfaction was observed in those teachers that had been equipped with technology resources and fit-for-purpose facilities such as science laboratories. In most schools, suggestions for improvements to their working environments, such as adequate air conditioning and lighting, were discussed.

As supported by the commentary in section 8.1 regarding supervision, teachers were generally satisfied that they are receiving support and supervision from principals, senior teachers and subject supervisors.

There appears to be a high level of dissatisfaction with the status of teachers. The Education Evaluation Project team members have heard negative stories about teachers across government departments, including Ministry of Education officials, leaders in the tertiary sector, within career development organisations and among business leaders. Examples of the negative teacher story that have consistently and continually presented to the Evaluation Project are listed below:

- Teaching is not a top-end career choice and that anybody can be a teacher.
- Many teachers do not want to be teachers.
- Many teachers do not have sufficient skills in Arabic and English to teach effectively.
- Many teachers have been educated overseas and are poorly qualified.
- Teaching is considered a job for life that many enter as a money earner and then they quickly seek a second job.

There was a high level of dissatisfaction identified through interviews regarding the policies and administrative practices. Key issues identified leading to a high level of dissatisfaction were:

Teacher transfer policy

The teacher transfer policy, in which a teacher is appointed to a school outside their home region, addresses the teacher demand issue in isolated areas. The logical assumption for the system is that by transferring teachers into hard-to-staff schools, there are sufficient teachers available, however, there is evidence to suggest that the teacher transfer has compounded the problem of teacher dissatisfaction. In particular, teachers who were in transfer arrangements noted:

- Time spent away from their families was a demotivating factor on their work. One transfer teacher noted that "it is difficult to care and nurture for other people's children when I am separated from my own" (Batinah teacher in Al Dakhliyah).
- Time to travel resulted in tiredness and increased frequency of absence. Fourteen teachers noted that the lost travelling time, from returning home to visit their families in the weekend, or in some instances daily, increased tiredness and was felt to be 'wasted time'. The travel time resulted in less time spent at the school, as some would leave early to get home, and also less time with their family.
- Transfer teachers were not informed of the duration of the assignment. Seven transfer teachers spoken to had been in a transfer arrangement for a six year period, and were having difficulty getting information about when the transfer arrangement was due to complete, and what opportunities there may be in their home regions for teaching roles. The long-term nature of the transfer arrangements, and ambiguity of when transfers would end, also reportedly led some female teachers to delay having children.

The consequence of dissatisfaction and demotivation with their transfer arrangements subsequently led to increased teacher absences, impacting upon learning time and teacher effectiveness. The separation from family also led to dissatisfaction with their personal lives, compounding the demotivation.

Salary increases

Although there was not a high level of dissatisfaction with the existing remuneration for teachers, some teachers identified two aspects of the salary policy as key demotivators, these were:

- Implementation of planned salary increases – teachers were anticipating a staged salary increase which was not delivered upon. Some teachers expressed frustration and a perception of burdensome central administration that was not able to implement the publicly communicated salary increase as scheduled.
- Remuneration for functions and duties – some teachers, by necessity were performing additional functions and had additional responsibilities, however were not recognised through remuneration or recognisable advancement. In one instance, a support staff member was performing the Deputy Principal role, and was undergoing continuity training to take over management of the school when the Principal went on maternity leave, however the formal role and subsequent remuneration was as a support staff member. Similarly, multiple instances of teachers who were performing some or all of the functions of a senior teacher, without commensurate remuneration, were identified.

Intrinsic factors, in terms of the way that teachers feel about their role and job, were closely linked to the issues arising from dissatisfaction with external factors. A common theme in the teacher and support staff interviews was that there were few opportunities for advancement to a higher position, or recognition for taking on extra responsibilities and duties.

Some schools had implemented initiatives to recognise high performing teachers and these were well received. For example, one school had recognised the top performing teacher, as voted for by the students.

Some schools had implemented initiatives to recognise high performing teachers and these were well received.

Similarly, a perception that more relevant teaching professional development could be offered was associated with a perception that there were limited options for personal growth. The exception to these comments was English teachers, who were largely satisfied with professional development arrangements, and curriculum professional development, which was generally well received.

Issues of responsibilities and job challenge were often linked to perceptions of workload. For those teachers that had higher workloads due to substitution arrangements or administrative duties, there was a medium level of dissatisfaction.

System mechanisms to address job satisfaction issues

Overall, the system has few mechanisms to detect and actively intervene in low job satisfaction. In the absence of regular surveys of teacher job satisfaction, the formal mechanisms to address issues is to sequentially raise them with the principal, the Ministry of Education Governorate office, the Ministry of Education Central office, and if serious enough, the Administration Court.

Of those teachers that had chosen to use the available mechanisms, only one teacher reported being satisfied with the administration's response. There were multiple instances of non-responsiveness from Governorate or Central administration to issues of varying degrees being raised. In some instances, these were serious issues that impacted on the school as well as the individual, for example, the need for urgent reparative maintenance.

Within the Ministry of Education, no single department has responsibility for policy development or monitoring of teacher satisfaction specifically, although a number of departments, primarily the human resource and development department, have responsibility for key influences on job satisfaction such as training, opportunities for advancement and growth.

Principals, as the first-line managers of schools, are key influencers on job satisfaction. In most instances, principals were appreciated as supportive leaders who were interested in addressing issues where they could, however due to the centralised administration of schools, often Principals were limited in their ability to take practical steps to address issues and complaints that were impacting job satisfaction. However, there was evidence of personal support from principals, in terms of listening to issues and encouraging and motivating teachers.

8.5.2 System Awareness of Issues and Challenges

The key issues facing the education system are:

- Policies that negatively impact upon the working conditions and personal lives of teachers.
- The negative script of teacher professionalism.

A key component of job satisfaction is the relationship between policies set by the Ministry of Education, and the impact upon the working lives of teachers when implemented.

Some awareness	There is some systemic awareness that there is job dissatisfaction amongst the teaching workforce, however causes of dissatisfaction do not appear to be well understood or articulated.

Within the system, there is a high level of awareness amongst Principals and Ministry of Education staff of a lack of job satisfaction amongst teachers, however there does not appear to be a consensus view of the key drivers of job dissatisfaction. During the school visit interviews, 46% of Principal's noted poor or very poor job satisfaction amongst teachers. The negative response rate increased to 57% of Senior Teachers noting that morale was poor or very poor. There is awareness that a positive story regarding the value and status of teachers could be scripted, and that the narrative of teacher improvement could be framed from a positive perspective rather than from a negative, or blaming point of view.

8.5.3 System Responses

The following system responses currently planned have been identified:

- Increasing the provision of training.
- Salary increases.
- Decentralisation of some Ministry functions to schools.
- Positive positioning of the teaching profession.

Increasing job satisfaction		
Appropriateness	Effectiveness rating	Efficiency rating
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

Response rating: Partially appropriate

As there are multiple facets to increasing job satisfaction, a matrix of responses is needed to address the issues that have been identified. It should be noted however that intrinsic motivators, that is, how teachers view their profession and their contribution to the education of the next generation, can be more powerful than external factors such as working conditions. In particular, the strong values that pervade Omani society, and pride in the Omani national identity, make the Oman system leaders well placed to have a significant impact by boosting intrinsic motivators.

The establishment of the teacher training centre and lifting the capability of the teaching workforce, as discussed in section 8.3 will go some way to improving intrinsic motivators in terms of teachers being given the opportunity to gain a sense of achievement and recognition for their skills. To maximise the impact of this initiative upon the motivation of teachers, it is recommended that consideration is given to linking teacher training to career progression. For example, a career pathway to becoming a senior teacher or Principal could be modelled to motivate teachers to engage in training, and also inspire a greater level of commitment to the profession by providing transparency regarding how to progress.

The Consortium understands that salary increases are scheduled to be implemented. This initiative will go some way to satisfying the salary and benefits component of job satisfaction. In line with the above recommendation to provide a transparent pathway for career progression, available advice regarding salaries linked to career development would also assist in ensuring teachers are motivated and aspire to higher levels of professionalism.

The 8th Strategic Plan articulates a plan to decentralise some functions to schools from the Central Ministry. Giving Principals greater control over resourcing and management of schools could enable issues of teacher job dissatisfaction to be more quickly and directly addressed, particularly in relation to working conditions. Principals will continue to be key leaders in terms of motivating teachers and setting and modelling positive team dynamics.

The Consortium considers the system leaders' approach to the negative story of teachers to be inappropriate and the way improvement strategies are formulated and communicated are continuing to contribute to the negative script. Most of the strategies for improvement of teacher practice use problem-based methodology, i.e. gaps/problems/weaknesses are identified and interventions designed to fill the gap, to fix the problem or to eradicate the weakness. There are positive elements identified in Ministry reports, but they tend to be about organizational or management elements that system leaders have put in place to fix the deficiencies associated with teachers. This response tends to suggest the system is doing the right things in the right way and that teachers have to come up to speed.

Effectiveness rating: Partially effective

A matrix of actions is an appropriate response to the multi-faceted issue of job satisfaction, however the Consortium recommends that there needs to be a consistent approach to monitoring job satisfaction to assess the effectiveness of each initiative, and as a package, to address motivating teachers to a higher level of professionalism.

The introduction of the teacher training centre is likely to be effective in lifting skills, however to link training to a higher level of job satisfaction, it will be important to recognise the achievements and professional growth of teachers that undertake training, and provide opportunities for teachers to utilise their skills on-the-job.

A salary increase is an effective mechanism and signal of the contribution of teachers to the wider social and economic development goal of a well-educated workforce, improving both satisfaction with salaries and benefits, and also recognition factors. Remuneration comparability with other public sector professions will also aid pay parity, which given the high proportion of women in the workforce, will provide teachers with a sense of recognition for their role and skills.

The current system responses are not effective in changing the negative script of teaching. System leaders have not yet taken the opportunity to re-script the nationwide story about teachers, although recognition of high-performing teachers is evident in some schools. It is possible to script a positive story nationally about teachers without losing sight of the challenges that need to be resolved. One way to do this is to foreground the positive aspects of teachers and teaching and reposition problem-practices as things that have to be addressed where they are found to exist – they do not exist in every classroom in every school.

System leaders may also wish to explore ways of boosting morale both at the school level, and within public messages. This could be achieved by:

- Providing principals with organisational development tools to proactively create positive working environments and recognise teacher achievements.
- Positive public profiling of teacher achievements and successes, particularly when linked to outstanding student achievement.
- When discussing policy responses, frame policy initiatives as being directed at poor practices and not people.
- Link teaching and schools positively to the national Omani identity and values. Education is a core component of Islam and there is an opportunity to ensure that the critical role of teachers in developing the next generation of leaders is tied to nationhood and recognises their contribution to achieving the social and economic aspirations as articulated by His Majesty Sultan Qaboos.
- Employ positive psychology techniques when describing and discussing teachers, in particular, an appreciative approach to understanding people's lives, assumes that the dominant perspective of systems and people's experience within these system are reciprocally related. Seligman and Csikszentmihalyi (2000) identified three pillars of positive psychology. These are positive subjective experience, the development of positive characteristics and the positivity of institutions or systems that impacted on people.

Positive approaches to understanding systems, organisations and the people within them create an optimistic climate for change. They also produce more successful and sustainable change efforts. Making changes using a positive view of the world requires the development of social or collegial bonds, excitement and inspiration to move to the next stage.

Efficiency rating; mixed efficiency

The efficiency of the initiatives to be implemented will depend on the ability of the Ministry of Education to effectively link and leverage the initiatives to shift to a positive national narrative about the role and performance of teachers, and by ensuring that opportunities are taken to model positive behaviour and build upon intrinsic motivators to create a sense of pride and accomplishment amongst the teaching workforce.

Similarly, the plans by the Ministry of Education to decentralise some functions to schools should take into account which duties and responsibilities could be transferred to principals to enable them to directly and quickly address job dissatisfaction issues that arise. Principals act as essentially front-line managers and are therefore well-placed to have oversight of the morale of the teaching staff, and consider ways to improve both working conditions and intrinsic motivators. Although some instances of positive recognition of teachers were identified at some schools, there was no evidence of a systematic culture of recognising achievement. Acknowledging achievement of teachers through existing mechanisms such as school newsletters, assemblies, or using low-cost communication options such as social media could work out to be highly efficient.

Using a 'champions' model, that is using well-respected key Ministry of Education staff, principals and teachers with existing networks to disseminate key messages, model positive behaviour and possibly directly mentor teachers has proven to be an effective mode of engagement for affecting wider cultural change. Although there would likely be some cost and resource expended on establishing a champions scheme, in the long term it could work as a cost effective model and encourage greater levels of professional sharing.

A problem-based approach to 'fixing the teacher problem' is not efficient. It drives to the need for more and more fix-it strategies and projects. This phenomenon is commonly referred to in the literature as 'add-on programmes' or 'picking off the cherry tree' (Spillane, 2002; Coburn 2005). Many countries that have gone through waves of schooling improvement and effectiveness reforms have fallen into the trap and come to realise investment in a small number of coherent strategies and utilising existing resources in new ways is a more effective and efficient way to build better schools.

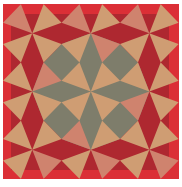
In order to assess the efficiency and impacts of initiatives upon teacher satisfaction, the Consortium recommends that regular monitoring of teacher satisfaction is completed, either at an individual school level, or centrally through the Ministry of Education. A yearly survey addressing key questions relating to external and intrinsic motivating factors will allow the Ministry of Education to track the job satisfaction rates of teachers, and by utilising other data such as attrition rates, monitor over time whether teacher job satisfaction is improving.

Conclusion

The qualitative data gathered through the school interviews and survey indicate a perception by principals and senior teachers of relatively low morale amongst teachers. The key factors impacting upon teacher job satisfaction are not clearly articulated, however recurring themes regarding the impact of policy implementation upon working conditions, a negative narrative regarding the performance of teachers, salaries and benefits, and low levels of motivation through a lack of systematic recognition of teacher achievement. The matrix of responses that the Ministry of Education have put in place provides opportunities to improve job satisfaction by providing more opportunities for professional development and personal growth; allowing principals to directly address job satisfaction issues through the decentralisation of some functions to principals, and shifting towards a more positive framing of the contribution of teachers to Oman's social and economic development. The efficiency of these responses can be improved by ensuring there are mechanisms in place to monitor job satisfaction, and ensuring that high performing teachers receive appropriate acknowledgment and recognition.

CHAPTER 9

SCHOOL CULTURE



The Terms of Reference for the Ministry of Education Evaluation of the Education System (Grades 1-12) set out the following components for the evaluation of the Teachers aspect:

1. **School effectiveness including:**
   - Role and performance of teachers, senior teachers, school administrators, principals and technical support staff; consideration of issues such as accountability, professionalism and the use of incentives.
   - Effectiveness of technical and administrative supervisors, and senior and chief supervisors in making schools more effective.
   - Social specialists, medical staff, career guidance specialists, activities specialists, finance and administrative specialists, data entry specialists and any others.
2. **Student regulations:** including regulations regarding student attendance, repetition and behaviour.
3. **Parents and the local community:** participation of parents and the local community; the role of parents' councils and mechanisms to facilitate communication between schools and parents; and the involvement of schools with the local community.

Summary

The establishment phase of Oman's education system from the 1970s into the new millennium was a remarkable development. In the future decades, system leaders will face the challenges of building on the sound foundation already established, to develop greater effectiveness and connectedness within and across the layers of the education system. Part of the challenge is to grow a new schooling culture from the old one.

This chapter identifies elements of the current schooling culture. The existing school culture continues to show aspects that were more relevant and useful in the early development of education but appear likely to be less so, as it transforms into a more sophisticated education future. This chapter notes that there are various Ministry of Education departments that can influence such a transformation in contextually appropriate ways.

Three important ideas are offered for this transformation:

- The school effectiveness section of this chapter presents models of teaching and learning in Oman in relation to its progression from a prescribed, routine mode to a more adaptive, differentiated teaching model. Progressing from a prescriptive and routine process to more creative and adaptive practices is worthy of priority consideration in relation to all parts of the system with school leaders, students, teachers and families.
- Regular attendance at school is strongly correlated with students' engagement in learning and the achievement of successful learning outcomes. Improving student attendance rates is therefore a key strategy for enhancing the quality of education. It requires development of an effective attendance management system as a mechanism for enforcing regulations and providing appropriate information at national, regional and school levels. The Ministry of Education has invested significant financial and human resources over the last few years to develop and implement an electronic student attendance system. This process has the potential to be a world-leading system for monitoring and managing student attendance to support improved learning outcomes. The Ministry now has the opportunity to realise a significant return on this investment and utilse this system to help it define critical key performance indicators on how well schools are performing. To achieve this return the Ministry should as soon as possible:
    - Make the 2012/2013 student attendance data available to schools, Governorates and relevant Ministry Directorates in appropriate tables and graphs.
    - Facilitate meetings and discussions with education leaders to identify any concerns, queries and recommendations in relation to improving the validity and robustness of the 2013/2014 and future years annual data sets.
    - Implement a work plan to develop real-time reporting functionality for student attendance data that meets the requirements of schools, regions, relevant Ministry Directorates and system leaders.
    - Use this information to determine suitable key performance indicators for education system performance.

- The need for schools to be an integral part of their local communities and the strong positive effect on student learning of parental involvement in their children's schools are undisputed factors in the international experience of school improvement. While recognising that the current arrangements for Omani schools have led to some improvements in how schools operate, the Education Evaluation Project evidence suggests these are insufficient, and that the school/parents/community relationship is in need of further strengthening. An area of improvement already known to the Ministry of Education is to use the current structures of the regional Parents Councils to investigate and develop a parent stakeholder engagement plan to assist in developing further approaches to more productive school/parent/community engagements.

9.1 School Effectiveness

9.1.1 How the system works

School effectiveness is about growing knowledge, practice and resources around evidence-based indicators of what constitutes high-performing schools. There are commonly agreed indicators of effectiveness and different countries tend to interpret and prioritise them in different ways depending on contextual issues, such as culture, stage of development and available resources. In the case of Oman, the terms of reference for school effectiveness for this report have a strong emphasis on the role and performance of teaching professionals within schools. That emphasis brings into play the relationship between teaching and the human capital within schools to support the act of teaching. The term 'teaching professionals' refers to teachers, senior teachers, school administrators, principals and technical support staff.

Oman's centralised school system was established to ensure that national standards are maintained in all schools and that strong accountability mechanisms are deployed.

In order to support schools to both meet these responsibilities and achieve the overall goal of the education reforms of the last 10-15 years, the Ministry of Education has put considerable efforts into a nation-wide schools development programme aimed at encouraging the development of a more conducive school culture and improved school effectiveness. As reported in the publication From Access to Success (Ministry of Education, 2006, p. 113-116), these efforts reflect a good understanding of what makes an effective school and effective learning. Documentation related to this aspect indicates the Ministry of Education's recognition that improving educational quality through effective schooling requires attention to:

- Strong leadership and, in particular, a principal with abilities related to the creation, implementation, and monitoring and evaluation of effective school plans.
- A school climate that ensures a safe and positive teaching and learning environment, suitable and sufficient teaching and learning materials and resources, high expectations of all students, and an effective and fair assessment system that enables students to improve their learning.
- The upholding of Omani values and traditions and maintenance of high-quality relationships among and between school managers, teachers, students, parents and other stakeholders.
- A high degree of involvement of parents, teachers, students, non-teaching staff, community members and other stakeholders in relevant areas of school functioning.

Oman systems leaders have chosen to grow the capability of teaching professionals within and around schools as a priority lever for improving effectiveness. Rapid development from the mid-1970s through to the new millennium was less about effectiveness and more about infrastructure and logistical provision to get students into schools. Since those remarkable early developments, Omani education systems leaders have been able to start thinking about more sophisticated knowledge growth, practices and resources that will grow effectiveness.

The Oman system has adopted three key mechanisms to drive up school effectiveness at the school leadership level, all of which emphasise the need for a healthy balance between accountability and professionalism. The mechanisms are:

- Ministry of Education support.
- Growing in-school leadership capability.
- Support from administration supervisors.

The Ministry of Education has acted as a support agent, on behalf of government, to grow school effectiveness. It is a supply-driven arrangement whereby schools are recipients of what the Ministry offers. Schools, therefore, rely on the Ministry for most operational aspects, such as regulations, facilities, staffing, curriculum, resources and transport.

The School Performance Development Department, within the Human Resources Development Directorate, has the main responsibility of working with school leaders to support and monitor the effectiveness of schools.

The School Performance Development Department comprises four sections:

- Performance Professionalism & Development Section.
- Rules & Regulations Section.
- School Performance Follow-up Section.
- Administrative Supervision Section.

Performance Professionalism & Development Section has the role of:

- Coordination with the directorates and departments with regard to improving the performance of schools in light of the results of the data analysis and reporting.
- Classification of schools according to levels of performance and planning follow-up in coordination with the concerned ministry and school districts.
- Development of tools to assess and follow up performance in schools and in coordination with the concerned ministry and school districts.
- Overseeing the formation of councils of parents, monitoring their progress and proposing methods for developing the work of these councils in coordination with the school districts.

The Rules & Regulations Section has specific responsibility for setting standards, plans and follow-up programmes evaluating performance in school, and proposing rules and regulations governing the work of public schools and monitoring their implementation.

Responsibilities of the School Performance Follow-up Section include:

- Setting standards, plans and follow-up programmes in school performance.
- Rating schools according to levels of performance in coordination with the relevant departments in the Ministry.
- Preparation of annual reports with indicators on the performance of schools in the Sultanate.

The Administrative Guidance Section reinforces the work of other parts of the system in relation to all components of this aspect. Responsibilities include:

- Following up and evaluating the performance of supervisors, administrators, principals and their assistants.
- Proposing regulations and rules for determining the functions and responsibilities of the administrative functions in school.
- Proposing plans and training programmes for supervisors, administrators, principals and administrative staff assistants.
- Selecting aide managers and school principals, supervisors, administrators and technicians and evaluating their performance in accordance with established standards.

Administrative supervisors, also located at governorate level, are responsible for monitoring and evaluating the overall effectiveness of schools. The goals of the national supervision service require regional administrative supervisors to make between three and six visits to each school per year. While the focus of each visit may vary, they have particular responsibility for monitoring and reviewing 'the way in which principals quality assure their schools with a focus on self-evaluation and school improvement planning' (Cambridge Report, 2013, p. 26). An expectation of administrative supervisors is that they will refer to student performance data in their discussions with a principal about the standards reached by students across all subjects, the trend in student performance over time, their school improvement plan and the strategies being employed to monitor improvement through the course of a school year and the meeting of realistic performance targets. The administrative supervisor role also requires the provision of training for principals in their governorate. This includes areas such as strategic planning, leadership and management, and devising and managing school administrative structures.

School support systems

As the Post Basic Education system has developed there has been increased recognition that students and their parents need appropriate career guidance about the choices available to them at years 11 and 12 and where these will lead in terms of further education or training and future employment. All Cycle 2 and Post Basic Education schools now provide such advice through career guidance specialists.

In co-operation with the Ministry of Health, a health programme has been introduced into all schools through which the services of medical staff – usually a nurse but sometimes a doctor – are offered to students in need for their attention (Ministry of Education, 2008, p. 63). All schools are equipped with a room for a visiting nurse (or doctor) and some schools have a nurse permanently on site. The Ministry of Health also supported a pilot programme in providing students with nutritious food.

It was reported some time ago (Ministry of Education, 2008, p. 63) that the role of the school social specialist was being redefined in order to meet the needs of socially deprived students more effectively.

One goal of the 8th Five Year Strategic Plan (2011-2015) is to "[i]mprove the efficiency of students' psychological, social, health and professional care and awareness programmes in schools". The development projects to meet this goal included the following:

- Provide and qualify the human cadres required to work as psychologists in schools.
- Complete the provision of the necessary degrees of social specialists.
- Provide and qualify human cadres specialised in healthcare programmes at schools.
- Improve the efficiency of career guidance programmes for students in schools.
- Create psychological, social and professional tests and measurements standardised for the Omani environment (2011, pp. 162-175).

9.1.2 System awareness of issues and challenges

It is clear from the planned programme of activities that within the relevant units of the Ministry of Education – Social Awareness Section, National Career Guidance Centre, Extra Curriculum & Students' Awareness Department, that there is a high degree of awareness of the issues and challenges faced in relationship to improving school effectiveness.

Until about a decade ago the role of the principal was to be the school's chief administrator (Ministry of Education, 2006, p. 37). Performance was evaluated by how well s/he had enforced Ministry of Education rules and regulations. Expectations of the principal's role and other school leaders are, however, changing.

The role of administrators, principals and senior teachers in Oman are in a process of transition from an organisational focus, to a leadership focus on supporting teaching professionals and evaluating professional performance. However, the transition is by no means clear.

The Ministry's professional development course, *Principals as Instructional Leaders*, is indicative of a shift in expectation from a principal's role focused on 'organisational administration' to one that emphasises 'instructional leader'. The Ministry's commissioning of a University of Cambridge report (University of Cambridge Unpublished Report, 2013) reinforces that expectation:

> Leadership training for Head Teachers to go beyond their role as managers and embed their role as curriculum [professional/instructional] leaders who are up-to-date with recent developments in teaching and learning and take an active role in the professional development of their teachers (p. 20).

The report noted that, because too many principals were not well prepared for the transition, it would be difficult to hold them to account for the quality of teaching and learning and standards reached by students.

The key issue discussed here relates to the level of progress being made by school leadership to shift from routine practice to adaptive practice. Routine practice is that which occurs repeatedly without alteration with the view that it is the 'right' way. Adaptive practice starts with a particular way of doing things and is constantly altered to improve the way it is done. The move from prescriptive routine approaches to the implementation of more differentiated, adaptive programmes has been encouraged since the introduction of the Grade 1-10 Basic Education system in 1998-99 (Ministry of Education, 2004a, p. 30).

Some awareness	The issue of shifting from routine practice to adaptive practice is noted in different forms in various Ministry documents.

There are signs of system-level awareness about the reasons for shifting from a routine to an adaptive teaching and learning environment. References to system-wide training in the analysis and use of data and identification of training needs of teachers and specialist staff in evidence-based differentiated teaching for inclusive education are evidence of that awareness. Full awareness in this case goes beyond professional training; it is more about creating an interactive and collegial learning environment among teaching professionals within and between schools. A synthesis of developments suggests that there are early signs of awareness of this bigger-picture component of school effectiveness.

The role of the Oman teacher is also in transition but there remains considerable confusion in the process. In the past, a teacher's main role involved routinised coverage of all aspects of the curriculum as determined by the Ministry of Education (Ministry of Education, 2006). It was a curriculum content-delivery role. That expectation was set in policy and in the routines of supervision. Nowadays, teachers are expected to take on a more sophisticated role; that is, differentiated delivery of the curriculum in a data-rich and inclusive schooling environment.

9.1.3 System responses

The table below outlines the ratings for the system response.

Shifting from routine practice to adaptive practice		
Appropriateness	Effectiveness rating	Efficiency rating
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

Response rating: appropriate

The rating of appropriate is arrived at by taking into account the range of responses that the Ministry has implemented to move school leaders from a routine practice to adaptive practice.

Some of these initiatives are proactive, focused on raising the skills of school leaders and/or setting the Ministry's expectations for school leaders. These include:

- Principal Leadership Training project. Since its inception, approximately 10 master trainers, one education expert, and 70 regional trainers have supervised and delivered two-week workshops to all currently active principals in Oman. The work of the last four years has focused primarily on the development and piloting of the modified curriculum and training materials and training of instructional and logistical staff. All of this work has taken place under Phase 1 of the Principal Leadership Training project, which has focused on the theme and content of "Principals as Leaders of Change".
- The Educational Evaluation Directorate collecting a wide range of performance data and ensuring that each principal has access to the performance data for their school (University of Cambridge, 2013, p. 10).

The responses focused on school leaders have been based on a number of Ministry and international reports to guide the move towards more adaptive practice. Recommendations are plentiful and, as the Ministry has discovered, they are not always in alignment with each other or the Oman context. Reviewing and making sense of the various pieces of advice is a task in its own right. The number and nature of commissioned reports indicate that system leaders are moving into adaptive ways of practice. They are receptive to critique and challenge and, at the same time, are considering recommendations carefully in order to respond in ways that are fully appropriate to the Oman context.

Other strategies are reactive, forming the basis of a school support safety net that will assist in lifting schools that are performing at the tail end of the system. For example:

- The development of systems to address student performance issues under the Student Achievement Follow-up Committee, which was established as part of Ministerial Decree No. 104 (Ministry of Education, 2012a). Relevant responsibilities in all governorates sitting under the main committee are to undertake quarterly analyses, visit and develop appropriate action plans for schools with low student achievement, and review the work of supervisors.
- Training subject supervisors in governorates to identify and support schools with significant numbers of students underachieving. The Analysis and Studies section in the Ministry of Education is leading the training, which has supervisors going into identified schools and talking with the administrators and teachers, communicating that they are there to support rather than punish them for the low student performance results. Support, therefore, focuses strongly on what has to be done to improve student learning.

These strategies also represent a distribution of responsibility from central Ministry committees and sections into governorates. Distributed responsibility of that nature creates an opportunity for governorate supervisors to differentiate their services to high- and low-performing schools.

Effectiveness rating: partially effective

A rating of partially effective is given because, despite the wide range of initiatives that have been underway, a significant number of school leaders are still locked in routine practice.

One review suggested that there are "Wide inconsistencies of practice between principals in their role as overall quality assurance managers of their own school" (University of Cambridge, 2013, p. 28). Most principals tend to observe teaching but the frequency with which this happens varies considerably between schools. Furthermore, there is inconsistency in how information about the quality of teaching, as observed by supervisors, senior teachers and principals, is used to develop a broad view of quality of teaching across the school and to understand the way teaching practice influences students' attainment.

Those critical comments have come after a four-year (2006–2010) Ministry of Education's Office of Educational Programs and School Performance Development Department collaboration to conceptualise, design, and then implement the Principal Leadership Training (PLT) project. The intent is to extend the project out to all principals in the Sultanate.

An Evaluation of the Short Term Impacts of the project reported on the impact short-term training courses had had on principals' practice. The evaluation report commented that "there is a small, but sizeable, group of approximately 25-30% of principals [who] are not only motivated to change and are effectively implementing foundational changes, but they also understand more complex and higher-order leadership concepts and techniques and they have made significant attempts to introduce them in their schools" (Technical Office Report, 2010, p. 24). These principals appeared to be better equipped to act as instructional support personnel in their schools. The Ministry will soon be making a decision about the long-term status of the Principal Leadership Training project and its pending plans to initiate Phase 2 of the project, focusing on the theme of "Principals as Instructional Leaders".

The actual use made by principals of their assessment results is not clear. Evaluations, such as that proposed for the leadership project, will provide a means of gaining clarity in that regard by asking about the impact the leadership project had on student learning outcomes. That sort of evaluation, not so much one conducted by external agents but by school leaders as well as teachers, will be vital for growing school effectiveness within the Oman schooling system.

> Routine practice is that which occurs repeatedly without alteration with the view that it is the 'right' way. Adaptive practice starts with a particular way of doing things and is constantly altered to improve the way it is done.

A further difficulty facing the system in effecting a leadership change is that while school leaders are being encouraged to take greater responsibility for school leadership, they are in a system that has the Ministry of Education acting as the support agent, on behalf of government, to manage the operation of schools. Schools, therefore, rely on the Ministry of Education for most operational aspects, such as regulations, facilities, staffing, curriculum, resources and transport. A consequence of strong central decision-making is low-level management responsibility and autonomy in decision-making within schools. The quote exemplifies the dependency on the Ministry that has developed:

> There is no Principal, no social specialist, four teachers still to arrive in Oman and the amenity of the buildings is poor. The data entry person who has been here for two years is making sure the school runs every day. The Deputy Principal is taking some of the responsibility. The staff feel unsupported especially about the classes sizes, 34 is the smallest size class, and lack of resources. Books are late, not here yet. School staff blame the Ministry of Eduction rather than school management because all these things are decided by the Ministry (School interview).

This to some extent indicates a lack of clarity about respective roles. Educational professionals, such as principals, teachers and supervisors, require clarity about their specific roles and the Ministry of Education has recently distributed to schools updated job descriptions for professionals. However, achieving role clarity alone will not sufficiently challenge the routine approach taken by some schools to curriculum delivery and school development. A priority here is to extend beyond role clarity and to identify and focus on the system levers that will break the cycle of routine practice.

Reinforcing routine or adaptive practice

One way to illustrate the issue is to present two scenarios and compare them in terms of routine and adaptive approaches. Scenario One, a routine scenario, and Scenario Two, an adaptive version, are presented below for this purpose.

- **Scenario One: Hand-over encounters around routine information.** A science supervisor hands over chemistry information, both content and teaching methods, to each science teacher under her/his supervision. The teachers, in turn, hand over the chemistry information to the students using the teaching routines outlined by the supervisor. The supervisor/senior teacher/principal then conducts classroom observations to check that content knowledge is being transferred to the students correctly. Follow-up conversations with each science teacher focus on getting the content and teaching methods right.
- **Scenario Two: Interactive learning encounters around information that is constantly adapted.** A science supervisor engages in a learning conversation about the same chemistry information with the same science teachers but in a group, not individually. After receiving the information, the teachers check one another's understanding of this new information in relation to existing information they use to teach chemistry. They eventually agree on the right mix of old and new information. The supervisor/senior teacher/principal supports the teachers to adjust teaching goals for practice improvement and conducts classroom observations in relation to those goals. Post-observation discussions between the supervisor, principal and teachers agree on progress against the practice improvement goal. They also agree on appropriate alterations to teaching practices.

The first scenario is an example of a hierarchical (also referred to as 'top down' or 'vertical') hand-over encounter that grows routine knowledge about chemistry. It also maintains a knowledge hierarchy whereby the supervisor and senior teacher are considered to have expert knowledge, the teachers have less knowledge and the students have the least. That arrangement leads to generic teaching practice, strong external accountability, and teachers remaining in a state of passive receivership rather than actively growing their professionalism.

The second scenario connects the teachers in a collegial (also referred to as 'lateral' or 'networked') learning arrangement that generates the growth of shared knowledge and expertise. There is no hierarchy of knowledge; all participants are part of an open source knowledge sharing environment. The supervisor is simply feeding teachers new ideas to alter their existing content knowledge and teaching routines for the better. It is all about collective sense making and specific practice improvement goal setting. In this case, the knowledge transfer is nothing about routine acceptance; it is geared to merging new and old information and adjusting teaching practice accordingly, both of which are adaptive acts. This arrangement grows differentiated teaching practice and strong internal accountability, and it positions teachers alongside senior teachers and supervisors as equals in a knowledge mobilisation environment that grows professionalism.

Efficiency rating: not known

The not known efficiency rating reflects the lack of financial information about the area of school effectiveness. A significant number of staff are engaged in the process and the costs associated with multiple school visits by central and Governorate staff are significant. How much time school leaders spend in meetings with visiting Ministry and Governorate staff is also unknown.

The not known rating also reflects the lack of systems information on the actual outcomes of the expenditure on improving school effectiveness.

The functions of the School Performance Follow-up Section include:

- **Setting standards** and tools needed to assess school performance.
- Developing plans and programmes for **performance monitoring and evaluation** and development of school.
- **Rating schools according to levels of performance** in coordination with the relevant departments in the ministry.
- Preparing periodic reports with **function indicators on the performance of schools** in the Sultanate.

The Consortium notes, from key informant interviews and analysis of annual reports produced by the School Performance Follow-up Section, that:

- No standards have yet been set for evaluating school performance.
- Schools are not rated according to levels of performance.
- No function indicators have been developed.

The explanation provided is that the School Performance Evaluation approach was not fully implemented after a decision, in the early phases (mid-2000s) of implementing the School Performance system, to move from Performance Evaluation to School Performance Development.

The Consortium notes that the Ministry is currently considering a proposal to move to a School Performance Evaluation approach with associated key performance indicators.

Another point to be considered is the positioning of students and families within the arrangement. In terms of efficiencies, it is useful to ask the following question: Is the investment in supervision for teachers, senior teachers and principals worthwhile without students and families being part of the arrangement?

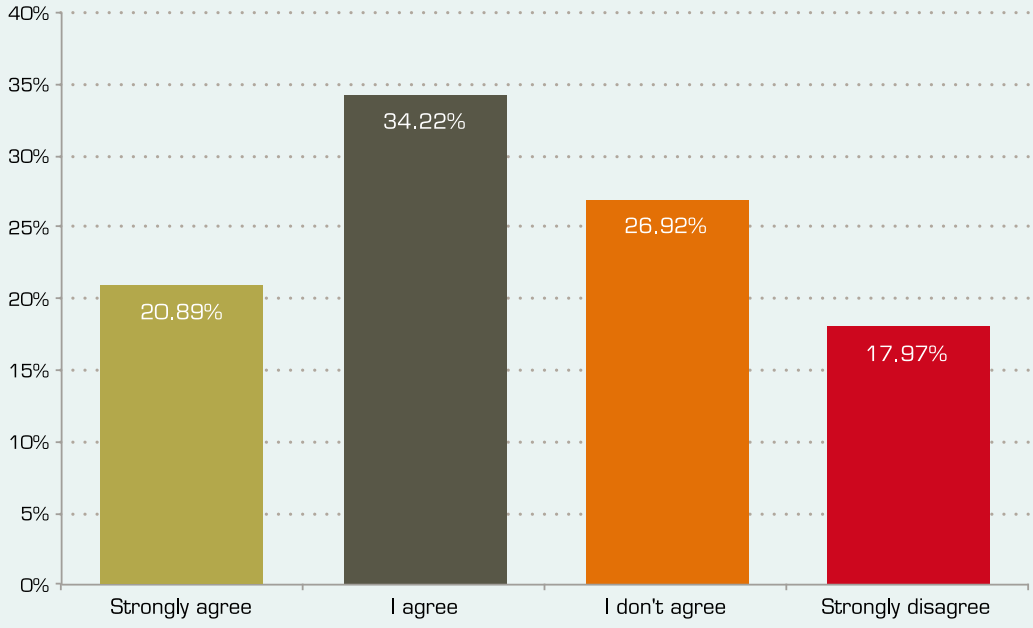
The University of Cambridge (2013) found that views of students were not sought in determining the quality of teaching or school effectiveness in Oman. A consequence of non-involvement of students in judgements about quality teaching and school effectiveness is that the students are positioned as passive recipients of whatever content and delivery that supervisors, school leaders and teachers think is good for them. Student voice, agency and leadership are becoming far more prominent in schooling systems across the world (Innovations Unit London, 2013) as student involvement in evaluative judgements helps to take some responsibility for improving their own learning practices. There would also be value in extending those arrangements to support families in determining how they can better support their children's learning.

Conclusion

Systems to support school effectiveness are still in an early stage of development in Oman, but some systems leaders have shown a clear preference for growing the capability of school leaders and teaching professionals as a priority. Clarifying the roles of the various professionals will be useful, especially if the roles support teachers and school leaders to grow adaptive practice.

It is a move from routine practice to adaptive practice that is leading the way in what constitutes contemporary school effectiveness practice. The Oman education system is at a point now where it will either continue to routinise teaching and learning or it will adjust to a more adaptive environment. Michael Fullan, a renowned global leader in school effectiveness, recently cautioned against persevering with routinised teaching and learning because student boredom is likely to cause serious levels of disengagement in formal learning (Fullan, 2013). In keeping with Fullan's cautionary statement, the Consortium found that Omani students had many positive things to say about their school experiences but there was a strong boredom factor.

Graph 9.1 I often feel bored in class



Source: Evaluation Project survey data 2013

9.2 Student Regulations

9.2.1 How the system works

The regulations regarding students' attendance, repetition and behaviour as established by Ministerial decree No. 105/2012 are outlined below.

Attendance

Regulations regarding student attendance are outlined in Articles 24 to 32 of Ministerial Decree No. 105/2012:

- Students are considered late if they arrive after morning assembly, and this is to be monitored by a member of the School Board. A student is reprimanded if late. On the third occasion of lateness, the student's parents will be advised and asked to commit to improved timeliness.
- A School Board member also monitors absences, classified as being away for one day or one lesson without explanation. If a student is absent, s/he is reprimanded. At eight days of non-attendance (continuous or not), the case is investigated and parents are asked to undertake that their child will attend.
- At 15 days of non-continuous absence (without approved reasons), students in Grades 1–4 may have 20% of their continuous assessment grades for the year deducted; and students in Grades 5–12 may have 50% of their continuous assessment deducted, and be withheld from sitting exams.
- If a student is away continuously (without approved reasons) for 15 days, s/he is expelled. In a case of student expulsion, the school may work with the family and Sheikh of the village to encourage compliance with attendance requirements, or organise the student's enrolment in an alternative school or adult education centre.

Repetition

At Grades 1 – 4, all students progress through the levels, with remedial plans put in place if a student is in receipt of an 'E' grade.

In 2013 new regulations were implemented for G5-10 students. Under the new regulations academic progression became more stringent than it was in the past. All students advance automatically into the second semester of their grade level despite ratings in the first semester. At the end of the second semester, however, advancement into the next grade level is not automatic. Advancement or repeat is dependent on the number of subjects failed.

- If a student scores an 'E' grade for a full-year result in Islamic Education, Arabic, English, mathematics, science and social studies subjects, they must repeat the subject.
- If a student scores 'E' grades in more than three of these subjects they must repeat the year.
- If a student repeats a year and is graded with three or more 'E's when repeating, the student is permitted to progress with a remedial plan in place.

The shift from social promotion to pass-fail advancement was introduced as an incentive for Grade 5-12 students to take more care about achieving good academic results. Any thought of automatic rite of passage through all grade levels with their peer group was removed.

Behaviour

Articles 33 to 38 of Ministerial Decree No. 105/2012 outline student behaviour and disciplinary protocols:

- Student behaviour breaches and punishments are scaled. The lowest level of breach and punishment is a reprimand for low-level offences, such as lateness, failure to comply with uniform requirements, or not doing homework.
- The next level of punishment is for repeat minor breaches and may be escalated to advise parents of the student's behaviour and get written agreement that the child's behaviour will improve.
- More serious offences such as smoking, taking drugs or damaging His Majesty's image is punishable by a three-day suspension. When a student is suspended, s/he must either stay home or come to school and spend 75% of their time doing supervised activities in the school hall.
- In the case of constant low-level breaches and the second time of a more serious offence, a student is referred to a Committee who may issue a suspension of five to ten days.
- For Grades 10–12 students, more serious offences such as physical violence may be punished by a transfer to another school or an adult learning centre. A student is expelled if awaiting a judiciary case.

9.2.2 System awareness of issues and challenges

In terms of student behaviour regulations, the documentation details a clear process for addressing needs as they develop. The Consortium did not identify any significant issues or concerns in system documentation or interviews about student behaviour in Oman schools. Issues and challenges surrounding the consequences of regulations introduced by the Ministry to reduce student repetition, thus improving the internal efficiency of the school system, are discussed in Chapter 7 Student Performance and are not further explored here.

The key issue explored in this section relates to the implementation of student attendance regulations as outlined in Articles 24 to 32 of Ministerial Decree No. 105/2012. Although school attendance is not currently compulsory in Oman, there is a set of regulations in place for all schools to follow when dealing with student lateness or non-attendance, depending on the seriousness of the problem. The responsibilities for recording, following up, monitoring and dealing with student non-attendance are clearly designated to particular positions within each school (including the Parent Council) and to School Performance Development officials at the regional level.

The key issue discussed here relates to the monitoring and management of student attendance by schools and the education system.

Partially aware	The system has a partial awareness of the issues, challenges and opportunities of managing student attendance.

The Consortium assigned the rating of partially aware on the basis that while there is evidence of monitoring and management of student attendance, these activities have not been linked to the substantial data now available in the e-portal..

The fact that regulations exist, electronic records are kept, and manual reports on student absenteeism are generated at school and regional levels demonstrates an awareness of the issues and challenges of managing student attendance. This is only partial, however, as there appears insufficient awareness, and no evidence of utilisation, of the substantial data now available within the E-portal system implemented across 98% of schools over the last four years.

In the 2012/2013 year Governorates, in conjunction with schools, followed manual reporting procedures to report on average annual student absenteeism rates by individual school. This reporting was not aggregated at any level within the system to provide regional or national student attendance patterns or averages for the 2012/2013. While schools and regions were required to complete these reports the data already entered by schools on student attendance was available in the E-portal but remained unused.

The following table sets out the use by schools of the student absenteeism recording function of the E-portal system over the last four years.

Table 9.1 Number of schools entering student attendance data on e-portal by year

Academic Year	2009/2010	2010/2011	2011/2012	2012/2013
Total schools recording student attendance data (in 2nd semester of academic year) on e-portal	495	567	834	1018
% of total schools represented	48%	54%	80%	98%

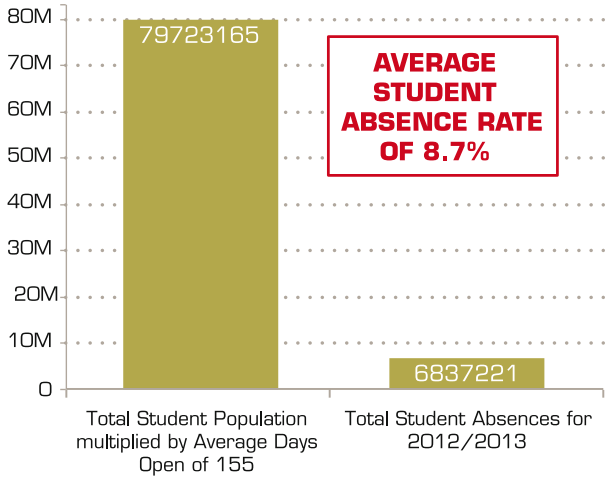
The E-portal now has rich data on absenteeism that could, with the addition of reporting technology, provide:

- School leaders with the ability to monitor and track attendance patterns of individual students, classes and age cohorts (and track attendance patterns against learning achievements).
- Governorate staff with the ability to monitor and manage their schools ensuring they follow student attendance management procedures.
- Governorate staff with the ability to monitor and analyse student attendance patterns within their regions and consider them against national patterns.
- System leaders with an evidence base for identifying and monitoring initiatives to assist schools and Governorates to improve student engagement with formal learning.

Data of this nature potentially represents a significant return on the investment, both of the Ministry of Education expenditure on a technology system, and of schools' staff's time in gathering and entering the data.

The Consortium has used the 2012/2013 student attendance data from the e-portal to estimate the annual student absenteeism rate. E-portal data showed that there were approximately 7 million student learning days lost through student absenteeism. Given the 2012/2013 population of just over 500,000 students, this means that there were approximately 14 days lost per student. Based on an estimated total possible student days in the year of approximately 80 million (500,000 students x 154 average learning days across Oman schools) the 2012/2013 absenteeism rate is estimated at 8.7%.

Graph 9.2 **Tile Average student absence rate for 2012/2013 based on e-portal data**



Undoubtedly there will be concerns and queries raised by stakeholders about the validity and robustness of this initial full annual set of student absenteeism data. The Consortium recommends that there are widespread opportunities for these concerns and queries to heard and debated. From these discussions with Governorates and schools will come the opportunity, and in all likelihood, the demand by all to identify and implement mechanisms for addressing data concerns. The richness of this data and the potential impact on improving student learning outcomes of the information that can be extracted from it should leave all stakeholders in little doubt of the importance of ensuring the accuracy of future annual data sets.

It is likely that if the Ministry engages in discussions with schools and regions on the 2012/2013 data immediately, then any recommended process improvements can be implemented to ensure that the 2014/2015 data set will provide a valid benchmark for future detailed monitoring and analysis.

In considering the 2012/2013 data set it should be taken into account that while a daily attendance rate of 90–95% rate may be considered an indicator of good attendance, it may equally conceal a problem of chronic absenteeism that works to prevent raising the quality of education overall. This is particularly so when early-grade students are frequently absent from class, thus setting the pattern for later years as well as preventing them from acquiring knowledge and skills required for a properly sequenced cognitive development. The link between non-attendance, failure to reach desired learning outcomes and eventual drop-out has been well established.

Also established in international research is the link between non-attendance, underachievement and over-age students, especially in countries like Oman that have rapidly expanded access to schooling in a relatively short time period. This is highlighted in large-scale empirical research of the University of Sussex-based 'Consortium for Research on Educational Access, Transitions and Equity (CREATE, 2011, p. 26). CREATE is a programme of research undertaken across many countries (mostly in South Asia

and Africa) aimed at accelerating progress towards the Millennium Development Goals and the Dakar commitments to Education for All. Specifically it aims to increase knowledge and understanding of the reasons why so many children fail to complete their schooling successfully and it adopts an expanded vision of educational access that includes concerns for attendance as well as enrolment, progression at the appropriate age, achievement of learning goals, equitable access to opportunities to learn, and availability of an adequate learning environment.

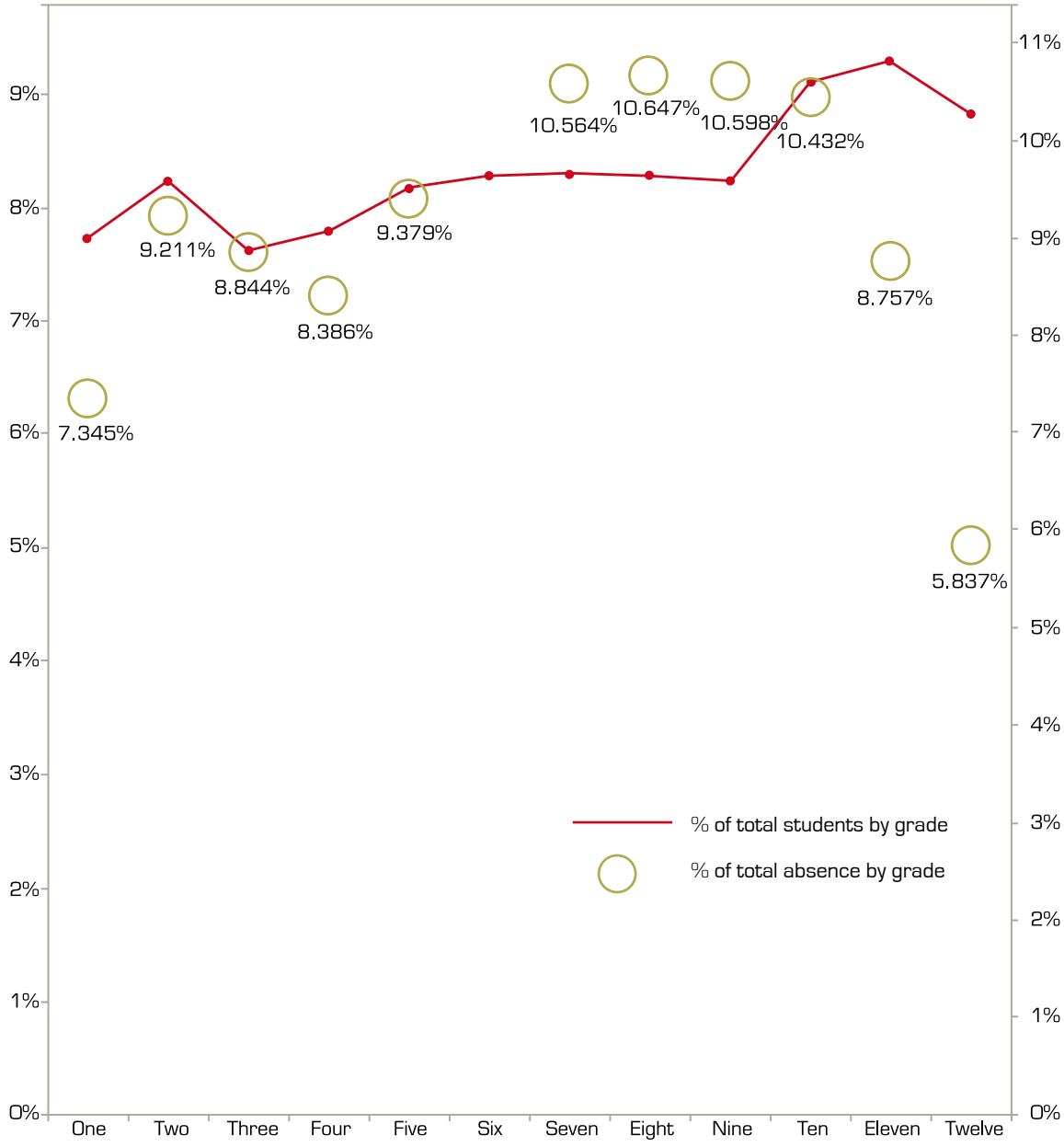
A major contribution by CREATE to international 'education for development' debates about how to raise the quality of schooling in countries that have rapidly increased access (numbers of students enrolled) to their school system is the notion of "silent exclusion". This refers to students who are enrolled in school but attend irregularly (especially those whose daily attendance rate is less than 90%), are learning little (often performing at least two years below their year or age level on assessment measures, especially in language and mathematics), are likely to have repeated at least one year of schooling and are over-age, and are at risk of either dropping out or failing to reach minimum learning goals (CREATE, 2011, p. 28).

The E-portal system, with appropriate real-time reporting functionality, would provide school leaders with the opportunity to track, identify and implement interventions for at-risk students.

The E-portal system, with appropriate real-time reporting functionality, would provide school leaders with the opportunity to track, identify and implement interventions for at-risk students.

The graph showing student absences by grade levels is a good example of one of the many potential uses of the E-portal data. The red line represents the percentage of each grade level as a percentage of all students. The green circles represent the absenteeism rate for that grade level. If the rate is under the red line it is a sign of lower than expected average absenteeism for that grade on the basis of that grade's percentage of the student population. A rate on the red line is expected and above the line is higher than expected levels of absenteeism. Grades 1–6 are fairly well engaged in school while Grade 7, 8 and 9 students are disengaging in school. An initial observation is that Grade 10 students appear to come back to an average level of engagement as they start focusing on end-of-school examinations. Grades 11 and 12 become highly engaged as it appears those students have high intrinsic motivation to pass Grade 11 and 12 examinations to position themselves for good tertiary and employment opportunities. Graphs of this nature could be made available to individual schools (based on their data) alongside with comparator graphs at the regional and national level.

Graph 9.3 **Student absence rates by Grade level and proportion of total student population (2012/2013)**



Providing these types of graphs on a real-time basis to Governorates and school leaders based on national, regional and school-level data should be a very high priority for the system. There is further potential to link absenteeism data to student performance data that is also recorded in the E-portal. There is plenty of scope to link and use these data sets in numerous ways within the Ministry of Education, within Governorates and within schools. It will be particularly useful to analyse the data for the impact of student learning time across school types within and across Governorates and against national trends.

9.2.3 System responses

Monitoring and management of student attendance		
Appropriateness	Effectiveness rating	Efficiency rating
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

Appropriateness

The rating of partially appropriate is assigned because the Ministry has the regulations in place and demonstrates efforts to respond to what is supported by international research (see for example, Epstein & Sheldon, 2002) to be the most appropriate way of enforcing school attendance; that is, by the school employing community support (Parent Council involvement) and allocating responsibility for monitoring attendance (class teacher) and communicating with the family of the non-attending student (social specialist).

The Ministry also over the last four years has invested significant resources to implement a centralised technology system that has captured rich data on student attendance at an individual school level. The appropriateness is considered as only partial, however, because the Ministry has not so far provided (or planned to provide) schools and Governorates with the reporting tools to allow the rich student attendance data now available in the E-portal to be used to manage student attendance.

Effectiveness

The system's response to the issue of enforcing the attendance regulations is rated as likely to be effective. The intended outcomes of the regulations are clear and the E-portal system provides the opportunity for sophisticated monitoring and follow-up procedures to be implemented, if the required reporting functionality is provided to schools, Governorates and relevant Ministry Departments.

Efficiency

A rating of efficient is applied on the basis that the E-portal, with required reporting functionality, will reduce a range of current manual reporting requirements for schools and Governorates for student attendance data, at the same time as improving the accuracy and value of the information.

Conclusion

Regular attendance at school is strongly correlated with students' engagement in learning and achievement of successful learning outcomes. Improving student attendance rates is therefore a key strategy for enhancing the quality of education. It requires the development of an effective attendance management system as a mechanism for enforcing regulations and providing appropriate information at national, regional and school levels.

The Ministry of Education and schools have invested significant financial and human resources over the last few years to develop and implement a student attendance system that now has the potential to be a world-leading system for monitoring and managing student attendance to support improved learning outcomes.

The Ministry now has the opportunity to realise a significant return on this investment.

To achieve this return the Ministry should as soon as possible:

- Make the 2012/2013 student attendance data available to schools, Governorates and relevant Ministry Directorates in appropriate tables and graphs.
- Facilitate meetings and discussions with education leaders to identify any concerns, queries and key recommendations in relation to improving the validity and robustness of the 2013/2014 and future years annual data sets.
- Implement a work plan to develop real-time reporting functionality for student attendance data that meets the requirements of schools, regions, relevant Ministry Directorate and system leaders.

9.3 Parents and Community

9.3.1 How the system works

The Parents Council Regulations outline the objectives and sub-committees responsible for implementing initiatives within the School Culture aspect. The regulations specify that the Parents Council has been established to: strengthen links between the school and the community; support collaborative solutions to social issues; work on meeting student needs; help in identifying how special needs students can best raise their educational and social achievement; and teach children about social responsibility.

The Council is comprised of four sub-committees with responsibilities as indicated:

1. **Education and Student Affairs:** following up on student achievement; liaising with families with special needs children; and encouraging positive behaviours such as regular school attendance and valuing education.
2. **Social:** creating links between community stakeholders; supporting families with social or economic needs; and promoting positive behaviour such as the cessation of harmful habits.
3. **Health and Environment:** promoting wellbeing and healthy lifestyles; educating students and the community about environmental preservation; and organising Ministry of Health lectures and competitions for cleanliness.
4. **Activities and Events:** writing an annual plan and organising activities for celebrations; encouraging and incentivising student and parent participation in activities; and organising visits for delegations.

All sub-committees report back to the Chairman of the Parents Council.

Ministry of Education expectations of schools in this policy area are stated in the **School Performance Development Guide** (Educational Planning and Human Resources Development department), which includes the following sub-heading, Standard 5: Tighten relations with parents and community institutions.

Assessment of how well the school fulfils this standard is to be estimated through the following indicators, in which awareness of the perceived link between parent involvement with the school and their children's learning is clear:

1. School administration contacts parents consistently.
2. School administration provides parents with information about their children's learning performance.
3. School administration supports the role of parent councils in school.
4. School administration involves parents and community institutions in promoting student learning (p. 17).

9.3.2 System awareness of issues and challenges

The key challenge facing the system is the need to develop and maintain a productive engagement between schools and the parents and communities they serve.

The rules and regulations for schools ensure that there are engagements (e.g. meetings, correspondence) between schools and parents. The challenge for the system is in supporting and monitoring schools to ensure that these engagements result in improved outcomes for learners.

In relation to this key issue, the Consortium finds that the system is fully aware of the challenges it faces in trying to strengthen the relationship in order to support the achievement of desired outcomes for Omani learners.

Fully aware	The system is fully aware of the challenges it faces in trying to strengthen the relationship in order to support the achievement of desired outcomes for Omani learners.

The 8th Five Year Strategic Plan aims to allow the local community to participate in managing the educational organisations by more decentralisation and the activation of parent councils. The awareness of the importance of the school/parent/community relationship was well established through the 2004 Canedcom Report (pp. 71-73) that evaluated Cycle 1 schools. The report asserted that the involvement of community members in this way would increase parental involvement in the school and thus enhance their children's learning.

In 2006, From Access to Success reported the Ministry of Education's intention to "strengthen parent councils" (Ministry of Education, 2006 p. 139) and the awareness of the need for more effort in this area was reinforced by the recent World Bank Sector Review (Ministry of Education/World Bank 2012a). Their analysis of Oman's 2007 TIMSS results revealed that home-related factors were correlated with better test performance and were likely to have significance in the stronger academic performance of girls compared to boys. While stating the need to approach such a finding with caution, given that these factors could also be correlated with more wealthy families or better educated parents, they argued that factors such as regular homework, books in homes and home computers do indicate the importance of such factors to student learning.

The report acknowledged that addressing issues of enhancing educational quality overall and the gender gap in particular will be a long process, in which expectations need to be raised, especially for boys, and parents' understanding of their role must be nurtured and their awareness increased.

9.3.3 System responses

Develop and maintain a productive engagement between schools and the parents and communities they serve		
Appropriateness	**Effectiveness rating**	**Efficiency rating**
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

Appropriateness

The rating of appropriate is arrived at by taking into account that the approach of positioning schools within their local community and parental participation in and support for the school their children attend are well articulated factors in Oman's school improvement and effectiveness system. International research is particularly clear on the strong correlation between parental involvement and student achievement. These factors are reflected in the education reform processes aimed at strengthening the various components of school culture in Oman that have been underway since the establishment of Basic Education schools in 1998. Included in these processes was the recognition of the important role of parents and community in the development and maintenance of an enriched school culture, within which all students have the opportunity and support they need to meet desired learning outcomes.

Effectiveness

The system's response as largely focused on the role of Parent Councils is seen as partially effective. Although the intended outcomes of the Councils and the school development objectives regarding parents' involvement in their children's schools are clear, the monitoring of their effectiveness is not highly prioritised in Ministry of Education strategic planning or action plans.

Key informant interviews conducted by the Evaluation Project Team identified that some Parent Councils appear to be working very effectively (as assessed by school leaders and parent council members) while others were seen to be adding little value to the learning outcomes of students. There appears to be significant variation across schools.

Observations from key informant interviews included:

- We have a very good relationship with our parents and community, but I don't think it's productive, i.e. we see each other often and get on well but I don't think it adds value to student outcomes
- Parent Councils tend to be used as fundraising body, that although there was a high level of parental engagement initially this declined when the fundraising role became obvious
- Most councils don't do the five things they are meant to be doing. Most parents don't want to be involved; they expect the school to do it
- It's easy to meet the bottom line, to show that your school has a parents council
- We are not aware of any regional Parent Council meeting being held in our Governorate or of national Parent Council meetings having been held in recent years
- How well it works is dependent on the principal and whether they have made an effort to involve the community.

A very positive comment on the work of a Parent Council at a Cycle 1 school, however, was reported as follows:

> The school has an active Parent Council. The Principal involves them, keeps them informed about student achievement and other matters, they come in to listen to reading, take substitutions using school prepared subject work sheets, take children on trips, visit families of low achieving or absent students to assist. The Principal also opens the school for the females in the community to come and learn in the evening.

Another, quoting a Cycle 1 school principal, indicated the use of social media as a communication tool:

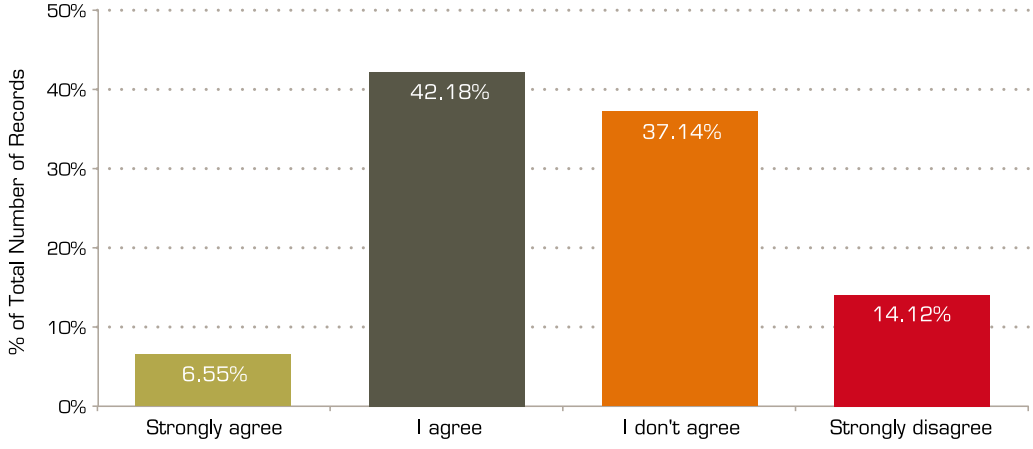
> We are using What'sApp to communicate with parents of underperforming students and get parents interested in what is happening at school and to keep them up to date with events.

An example of a less effective Parent Council approach is indicated in the following quote from a Parent Council member of a Cycle 2 school:

> Why would we want to know about student and teacher absence? It is a security matter. Everything is good...We do not ask questions of the school.

These qualitative comments are reinforced by the following quantitative data from the online data regarding teachers' agreement with the statement, 'The Parent Council at my school helps our students to achieve to their full learning potential'. More than half of teachers disagreed or strongly disagreed.

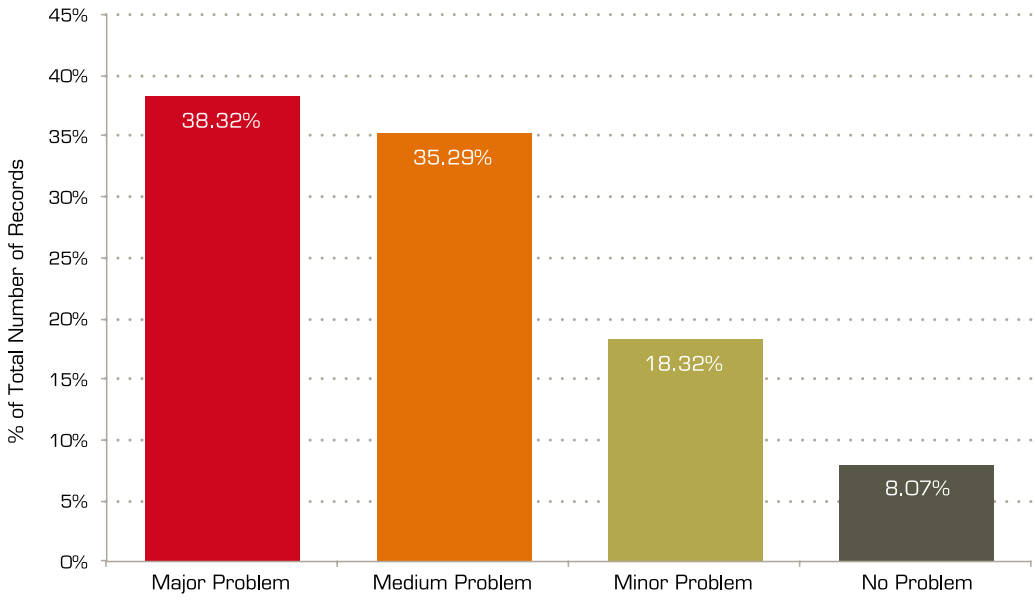
Graph 9.4 **The Parent Council at my school helps our students to achieve to their full learning potential**



Source: Evaluation Project survey data 2013

Even more concerning are teachers perceptions of both 'community support' and 'parent support for their children's learning' as a problem for their schools. Almost all teachers saw both as a problem to some extent, with the largest group of participants seeing each as a 'major problem' and the vast majority seeing them as either a 'major' or a 'medium' problem.

Graph 9.5 **To what extent is Community Support a problem for your school?**



Source: Evaluation Project survey data 2013

While emphasising the variation between schools, an overall finding was that in general parent and community involvement in schools was limited and that frequently there was lack of engagement and activity by Parent Councils. To quote one reasons for this, "they were unclear about their role and did not have timely and accurate information to effectively complete their role".

Efficiency

Despite the partially effective rating, a rating of mixed efficiency is assigned in recognition of the fact that the human resources involved are from those in existing Ministry of Education positions, and are thus sustainable within allocated financial resources, or they are from the parent body – presumably at no direct cost – so are also sustainable.

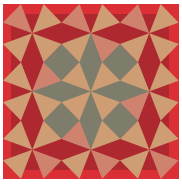
Conclusion

The need for schools to be an integral part of their local communities and the strong positive effect on student learning of parental involvement in their children's schools are undisputed factors in the international experience of school improvement. All school systems with a commitment to raising the quality of education must have in place appropriate, effective and efficient ways of optimising these important factors. While recognising that the current arrangements for Oman schools have led to some improvements in how schools operate, the Evaluation Project evidence suggests these are insufficient, that the school/parents/community relationship is in need of further strengthening.

Also recognised is that, although this is a globally accepted need, there are no global solutions. The best solutions must be developed from within, and according to the strengths and constraints of the context concerned. It is recommended that the Ministry of Education use the current structures of National Parents Council and the regional Parents Councils to investigate and develop a parent stakeholder engagement plan to assist in developing further approaches to more productive school/parent/community engagements.

CHAPTER 10

CURRICULUM AND ASSESSMENT



The Terms of Reference for the Ministry of Education Evaluation of the Education System (Grades 1-12) set out the following components for the evaluation of curriculum and assessment aspect:

1. **Scope and sequence:** appropriateness of scope and sequence for Grades 1 to 12 student textbooks, learning resources, teachers' guides and support documents in terms of international best practice.
2. **Values:** enhancement of values in the curriculum.
3. **School study plan:** subjects and activities offered and the number of periods allocated to them each week.
4. **Teaching and learning methodologies:** including the use of IT as a learning tool.
5. **Assessment systems and practices:** tests and exams, continuous assessment, summative and formative assessment.
6. **Extra-curricular activities:** range and effectiveness.

Summary

Oman systems leaders are working with international colleagues across all levels in the education system to ensure that contemporary practices in curriculum and assessment become standardised. An overarching finding of the Consortium, after evaluating this aspect, is that there is acceptance of the use of international best practice and what is now required is to put practice into place. The move from supporting this policy, to implementation is entirely achievable, subject to two preconditions. The first is that systems improvement leverages involve the strong existing foundation of curriculum and assessment infrastructure and practices. The second involves systems-leaders ensuring that the major initiatives (Assessment Centre, Specialised Centre for Teacher Training, and Curriculum Standards) currently underway remain closely co-ordinated, to ensure that each initiative plays its part in aligning curriculum and assessment design and delivery at school, regional and national level.

The key influences the Evaluation Project team have found in curriculum and assessment are:

- There is a solid foundation of curriculum and assessment. Basic and Post Basic Education have a broad curriculum, with strong Omani values woven into the design. There is also a good range of formative and summative assessments and comprehensive documentation about student engagement and performance.
- Continuing current efforts to collaborate and compare Omani curriculum and assessment with that of similar countries are critical to accelerate systems improvement. The value of this approach has been demonstrated already by the broad similarities observed when comparing Oman English, mathematics and science curriculum and standards with five other benchmarking countries.
- 'Student-centred' pedagogy is understood and embraced at a theoretical level, but is yet to be seen in practice in all schools.
- The new Curriculum Standards Project is an appropriate response to Oman contextual needs in curriculum. This work is critically important. Philosophy and curriculum design that reflects contemporary best practice is essential, however its actual implementation into schools appears to be some way off, based on the current thinking of systems leaders.
- As well the effective and efficient implementation of a well-designed Curriculum Standards Project is crucial to raising the quality of learning in Omani schools. The Ministry must ensure that there is a coherent and co-ordinated approach to making it happen so that it ensures the development of capability within the relevant units of the Ministry of Education.
- The current curriculum is over-crowded in terms of the content it is expected to cover within the time available. As well it is heavily prescriptive in terms of how it is to be delivered. While a structured, common curriculum is of central importance to most school systems, and there is much to commend in how the curriculum has been operationalized by the Ministry of Education, the current overly prescriptive situation is likely to be having some negative consequences on both the quality of teaching and learning. Again, the Curriculum Standards Project is a key mechanism for addressing these concerns.

- The Omani education context lends itself well to the timely development of a mixed teaching approach. The work in progress of the Curriculum Standards Project, the Assessment Centre and the Specialised Centre for Teacher Training could include this mixed pedagogy as a collaborative undertaking, across projects. This combined approach could improve much in the Omani school system. This move toward a more cohesive approach would give a more a well-defined and sequenced curriculum; better integration with subject specialist teachers; the establishment of clearer learning goals and evaluative criteria; and perhaps most significantly, schools in which teachers and students enjoy a positive teaching and learning environment and relationship.

10.1 Curriculum Scope and Sequence and Values Components

10.1.1 How the system works

The Curriculum sets out what is to be taught and learned as children/young people progress through school, in terms of knowledge, skills and understanding in each subject. The curriculum takes a central place in the working of the school. The selection of knowledge, values, skills and understandings to be included in the national curriculum are those seen as important and necessary for the nation's young people to learn and adopt. The type of curriculum in place, and the effectiveness by which it is delivered and assessed within the teaching and learning environment, will determine how well learners achieve the outcomes identified at each stage of learning. This ensures their progression along the pathways that will enable them as adults to participate fully in Oman's social and economic development.

The General Directorate of Curriculum Development consists of six departments with responsibility for servicing the school system in its delivery of the curriculum, listed as follows:

- Curriculum evaluation department.
- Teaching materials and book production centre.
- Human sciences.
- Applied sciences.
- Individual skills.
- First cycle programme development.

Current directions and activities of the Directorate are determined primarily by the *8th Five Year Strategic Development Plan (2011-2015)*. The overall aim of the plan with regard to this aspect is: 'Developing the learning plan and its curriculum, to guarantee an educational outcome which meets the development demands and labour market'.

The Curriculum Directorate Development Work Plan for 2013 indicates the Vision for core subjects and Mission and Aims for the year in areas such as: team planning, professional development, curriculum review, links to research and undertaking research.

Further insight into the workings of the system is provided by the *Education Programme* developed to deliver the curriculum related goals set out in the 8th Strategic Development Plan. The listing of what was achieved during the previous development period makes clear the extent of business in the Directorate of Curriculum. Achievements included the revision and development of 13 subject documents, development of 145 syllabuses and evaluation of another 21, plus production of a number of books, booklets and videos aimed at supporting the curriculum in various areas, and delivery of a range of seminars and workshops.

Oman's national curriculum is described largely in terms of compulsory subjects and is comprised of a series of *Scope and Sequence* documents for each subject area. The Scope and Sequence approach to curriculum development was introduced at the time Basic Education began in 1998. There are eleven compulsory subjects in the Basic Education programme: Islamic education, Arabic, English, mathematics, science, social studies, physical education, artistic education, music education, life skills and IT.

Oman's national curriculum is described largely in terms of compulsory subjects and is comprised of a series of Scope and Sequence documents for each subject area.

The Scope and Sequence documents were developed for two year levels at a time. The curriculum was built (with student textbooks and teacher guides for each subject and at each grade level) as students progressed, with all grade level documents completed and in use in 2006. Since then, the work of the Curriculum Directorate has been focused on revision and redevelopment of identified problems within the Scope and Sequence documents.

The Department for Curriculum Evaluation, established in 2005, is responsible for quality assurance of the curriculum materials, developed to align with the Scope and Sequence documents, that are destined for schools, primarily teacher guides and student textbooks. A committee for the each subject – comprising Supervisors, Curriculum and Assessment Department representatives, teachers and external experts – is established to undertake a review when the materials are in a draft form. The review considers the appropriateness of the content, objectives, and activities included for the level of education and overall fit with the country's education policy (NFER/CfBT 2012, p.7).

In the Post-Basic education programme there are seven compulsory subjects: Islamic education, Arabic, English, mathematics, sciences, social studies, and career guidance. Students are required to choose two or three additional elective subjects.

Values

The values to be enhanced through the curriculum include those expressed in the Ministry of Education's document (2004c), *The Philosophy and Objectives of Education in the Sultanate of Oman* relating to:

- Omani cultural identity and the traditions, customs and the historical heritage of Omani society.
- Oman's commitment to the Islamic religion's belief in equality between all citizens and social justice for all.
- Oman's 'belongingness' to the Gulf region and the Arab world.
- Oman's place in the global community and economy.

These values are reinforced elsewhere (NFER/CfBT 2012) by the statement that the curriculum aims to develop different sides of the learner's personality, a complementary development within the principles of the Islamic religion and the based on the Omani cultural identity.

Also stated is that learners should understand the values of work, participate in public life, develop community spirit, self-reliance and the ability to respond positively to an ever changing environment. The curriculum should encourage students to understand how to use resources sustainably and their role in the protection of the environment for future generations.

The need for students to develop critical inquiry, innovation, creativity and aesthetic values is noted in curriculum documents as is the need for their developing 'a positive direction towards craftsmanship in everyday life'.

These documented references to *Values* were elaborated on very recently by the Minister of Education when discussing the Ministry of Education's expectations of teachers (as reported by Oman News Agency, October 2, 2013). The Minister is reported as stating that the Ministry of Education assigns to teachers the responsibility to 'raise each generation the correct way and instil in them values, principles and high morals, to preserve the Omani identity, enhance creativity and skills like discovery, problem solving through scientific means, positive critique, entrepreneurship, to encourage interaction with other cultures and a positive reaction to the environment'. The Minister went on to say that all these values are needed for teachers to create a generation 'capable of bearing the responsibilities of building the nation'.

Noted, too, is that the recently established Curriculum Standards Project's proposal for a Curriculum Framework states very clearly that the four key curriculum aims are all based on Omani values, culture and philosophy.

The Evaluation Project Team visits to schools revealed that a high proportion of both senior teachers as a group, and teachers as a group, included values in their classroom programmes either on a case-by-case basis (38% senior teachers; 46% teachers) or had adopted a systematic approach to doing so (53% senior teachers; 47% teachers). Only a small proportion of senior teachers/teachers were unable to demonstrate either approach (7% senior teachers; 6% teachers).

Moreover, the Consortium findings are that Islamic Values underpin and permeate the curriculum very strongly as it is delivered in schools: 86% of students surveyed agreed/strongly agreed that their schools encourage Islamic values.

These findings affirm the Evaluation Team's interview with the Curriculum Director General who stated that values are inherent in everything they do – in curriculum materials, how teachers deliver the curriculum, how students are assessed – and are widely accepted as such, so they have not identified the need to enhance them further in any particular way.

10.1.2 System Awareness of Issues and Challenges

Internal and external stakeholders have expressed concerns about various components of the Oman curriculum over a number of years. Some concerns are focused specifically on the curriculum while others relate to the alignment between the curriculum and regional and national summative assessments. The stakeholder concerns have been highlighted further by Oman's results from recent participation in international tests such as TIMSS and PIRLS. The key challenge is how to evaluate, monitor and maintain the curriculum to meet national requirements and international benchmarks.

Partial awareness	The Consortium has found that the system is partially aware of the challenges and issues it faces in trying to achieve its desired shifts in teaching and learning methodologies. The issue is noted in some commissioned reports.

In response to these issues and challenges, the 8th 5 Year Strategic Development Plan identified the following two key objectives:

- Revise the scope and sequences for all subjects to bring them into line with international standards.
- Construct standards documents in each subject that contain descriptions of standards and examples of student work at various achievement levels.

Also identified were particular concerns about the four core subjects: Arabic, English, mathematics and science.

The challenges identified for the first target of 'the process of evaluating, developing, revising and executing educational curriculum' (ibid) fell into two broad groups. The first group were related to a lack of human and material resources for curriculum development, summarised as follows:

- Shortage of specialized human resource in curriculum development and lack of experienced curriculum team members.
- Insufficient time allocated to developing a course book and expectations that a large number can be produced in one year, resulting in negative effects on the quality of production.
- Lack of educational references, information and international educational publications to guide the writing process.
- Problems with the printing of large numbers of books, including getting bids in from printers, meeting printers' deadlines and meeting the requested publication standards.

The second group, to do with challenges in implementing new/revised curriculum materials, included:

- Inadequate professional development for teachers in the field of executing educational curriculum.
- No clear process in schools to direct the trail of lessons and units in a specific book
- The large number of projects that are implemented in schools which lead to poor student performance.

The plan to review the curriculum and address standards specifically was seen as necessary to ensure that students were being given the opportunity to reach their potential, whilst achieving the philosophical aims of education in Oman.

Evidence that awareness of the challenges associated with this issue has been developing over a number of years is indicated by a number of external agency reviews commissioned by the system in recent years. The 2012 World Bank Report recommended that global trends in curriculum development be considered. It also recommended that international (i.e. TIMSS, PIRLS) and national assessments be examined by the Curriculum Directorate to identify areas of the curriculum that need to be developed, modified, assigned to another grade level or dropped altogether. In particular the World Bank Report identified the English, mathematics and science curriculum as not preparing students adequately for further education or employment and recommended that curriculum standards be reviewed.

The system's awareness of issues in this area is demonstrated in the number of development projects and multiple associated activities planned by the Directorate of Curriculum Development in the 8th Five Year Strategic Plan (2011–2015). These are aimed at having in place study plans and curriculum that would ensure that graduates of the school system meet the requirements of national development and the labour market.

Moreover, the Directorate's Development Work Plan for 2013 states the intention to review the curriculum against Oman private school practice and international best practice. It can be seen that, in relation to this key issue, the system is fully aware of the challenges it faces in trying to achieve its desired outcomes for Omani learners.

10.1.3 System Responses

Various responses have come through the Directorate in terms of Departmental activities to revise subject specific curriculum, such as the development plan for applied science curriculum which was planned to begin in 2013, be completed in 2019, and introduced to schools in 2020. A strong rationale for improving the applied science curriculum has been developed, a report was provided to the Minister on the scope of a new G1-4 science curriculum in 2012, and, in 2013, a final report to the minister included a rationale for the development of a monocular matrix for G 1-12 science. Plans for curriculum review and development to take place over similarly long time periods for other subjects such as mathematics (completed by 2019/2020) and Information Technology (completed by 2022/2023) are also documented in detail. Based on this approach and timeframe much of what is planned for the IT curriculum will be redundant by the time it reaches its culmination in 2023.

This gave rise to key questions for the Ministry: are these subject specific activities the most appropriate way to address wider issues around the structures and procedures of curriculum development, curriculum standard setting and materials production? Would the extended timeframe for completing these developments be effective in meeting the needs of students, teachers, higher education institutions and employers?

The 8th Five Year Strategic Plan (2011–2015) justified the timeframe as necessary because of the limited curriculum development capability available, constraints on the time available because of other major tasks such as textbook development, production and distribution, and the time required to ensure teacher responsiveness to the curriculum changes. Despite these challenges being identified as limiting performance in the previous development period, the programme outlined in the 8th Five Year Strategic Plan (2011–2015) period included very little that would alleviate some of the effects of these challenges. It does nothing to address the wider issues around the appropriateness of the structures and procedures to ensure that Omani students have a curriculum that both affirms Omani knowledge and identity and prepares them for lifelong learning in the 21st century learning.

The very heavy workload of the Directorate General of Curriculum Development and the challenges identified by the Ministry in meeting current objectives and expectations raised questions for the Ministry in continuing with the plan outlined in the 8th Five Year Strategic Plan (2011–2015).

The Ministry has recently developed a more strategic and in-depth response to address concerns regarding the adequacy of current curriculum standards. In 2012 the Ministry of Education commissioned consultants from two United Kingdom agencies (NFER and CfBT), '...for the purpose of generating recommendations to inform future development and monitoring of Curriculum Standards in Oman'.

The first component of the Curriculum Framework Project, was a desk study (see NFER/CfBT 2012) which compared the Grades 1-12 English, maths and science curriculum and standards in Oman with those of five benchmarking countries (Korea, England, Singapore, Canada, Jordan). It found the Omani curriculum for each subject to be broadly comparable with benchmark countries; that curriculum frameworks for each subject specify clear learning objectives and outcomes. Overall findings are summarised as follows:

- **English curriculum:** a well worked-out blueprint for learning which covers the learning needs of the students comprehensively across the 12 years of formal education; reflects the place of English in Oman in terms of the uses to which English might be put by its citizens.
- **Science curriculum:** in line with benchmark countries, well laid out in a logical progression; modern and forward looking and clearly intended to prepare learners for the challenges of the future and further study.
- **Mathematics curriculum:** acknowledges the importance of mathematics in a modern global economy; aims to prepare students for the future by having strong foundations in mathematics and an understanding of its applications in real life.

Given that these findings are affirming of the curriculum content delivered to Omani students in these three core subjects, questions then arise about the delivery process itself and the environment within which teaching and learning takes place. These questions are addressed under the Teaching and Learning Methodologies Component of this chapter.

Another report from the NFER/CfBT study had the specific aim of providing a summary of current practice in this area. The report's findings on curriculum implementation were informed by Ministry staff views and based on information collected from schools and teachers. Findings related to curriculum standards and scope and sequence were that:

- The Scope and Sequence documents which contain the content and learning objectives vary greatly from subject to subject in terms of depth, structure and style.
- Some subjects put more emphasis on knowledge acquisition and retrieval than on developing underpinning skills of analysis, enquiry and synthesis of information.
- Knowledge and skills do not always build progressively through the grades.
- Some learning outcomes describe activities or 'what has been done' rather than 'why it has been done', this appears to be a particular issue in the Teacher Guides.
- Learning objectives are not always progressive; so learning outcomes found in higher grades do not always build on knowledge or skills used in lower grades. This could be due, in part, to the staggered nature of curriculum review (Lofthouse & Whitehouse 2012, p.4).

If the very positive findings of the first Curriculum Framework Project report about the scope and sequence documents for three core subjects are to be considered reliable, the findings above suggest that other subjects fall well short of the required standards.

A further key finding highlights a fundamental concern regarding the system's capability to respond to the issue effectively. The report stated that,

> The concept of 'Curriculum Standards' was not fully understood by staff within the Ministry. A clear need was identified to establish a common language as part of the Curriculum Standards project (ibid).

Other fundamental concerns raised by the report, in particular regarding the system's ability to respond appropriately, effectively and efficiently to the issues and challenges identified, relate to some crucial disconnections within the system.

The NFER/CfBT study's investigation of curriculum development processes in Oman, makes the significant point that because the curriculum is delivered largely through the Teacher Guides [and student texts], the Department for Curriculum Evaluation

> ...potentially plays a crucial role in the quality assurance of the curriculum .... They [Department for Curriculum Evaluation officials; subject committee members] felt they could potentially undertake the same quality assurance role in the development of Scope and Sequence documents and the development of learning methodologies to support the curriculum teams. They are the only department that has an overview of all the curriculum documents in circulation so also have a role to play in standardisation (Lofthouse & Whitehouse 2012, pp 37-38).

Other factors identified as working against improvement in curriculum delivery and learning outcomes are to do with the separation of the Curriculum and Assessment functions into discrete Departments under separate Directorates.

The final response assessed here relates to how the recommendations of the NFER/CfBT have been shaped in practice. The CfBT has been contracted to work in collaboration with the appropriate Directorates and Offices (Curriculum, Technical Office for Studies and Development, Human Resource Development and Education Evaluation) on the Oman Curriculum Standards Project which has the stated aim of developing a world class curriculum framework for Oman. The Oman Curriculum Standards Project has set four aims for all Omani learners that are 'based on the philosophy, values and culture of Oman and ensures that all students will achieve their full potential'. These aims are to permeate all aspects of schooling including decision-making and communication with parents.

It has also defined a set of learning outcomes for each aim to be met by students at Cycle 1, Cycle 2 and Post Basic education stages of the learning pathway, and to which each subject must contribute. It is appropriately learner focused and indicates a clear move away from the current separation of subject specific curriculum documents into Scope and Sequence. Teachers receive two separate guides for each subject, one delivering the curriculum and one on assessing students' learning from it, that have been developed separately by the respective Departments. Overcoming this separation should have positive outcomes for both teachers and learners.

While well-grounded in the Omani context, what is proposed is also well in line with current international policies and practices in curriculum development. There will be one Curriculum Framework document incorporating all school subjects and stages, with linking sections on 'teacher communities', 'using assessment criteria', 'texts and activities', and 'online resources'.

Each subject working party is to identify six strands of knowledge and six processes that are important to their subject and relevant through all grades. Each strand is then developed into a spiral progression in two-year stages so students can experience increased complexity as they progress through, but there is also room for consolidation of knowledge/skills before they must progress. The introduction of modules will mean that there will be no more than 12 topics being taught/learned over two years. The Module template explains learning objectives, assessment criteria and descriptions of achievement at various levels (CfBT n.d., 'Developing the Oman Curriculum Framework').

System response ratings		
Appropriateness	Effectiveness rating	Efficiency rating
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

In summary:

Despite a number of less appropriate earlier responses, the overall rating of appropriate is based on the planned Curriculum Standards Project as:

- Responding extremely well to existing needs and challenges in a significant area of schooling.
- Rooted firmly in the Omani context while aligning with international good practice in a realistic way.
- Being undertaken collaboratively across the relevant curriculum and assessment Departments of the Ministry.

In terms of the second dimension of effectiveness, the rating reflects the fact that it is too early to tell how well the response will work. If the Curriculum Standards Project is implemented as planned it is likely to be effective (with the potential to be highly effective) because:

- Expected outputs/outcomes are reasonably clear, and
- Inputs and processes are well chosen and planned carefully.

The mixed efficiency rating for this issue is based on the high level of external technical assistance, with a high associated cost. This cost, however, is seen as an investment which is necessary to meet current needs. What is important is that local capacity and capability are built during this project so that this important intervention becomes sustainable within the resources of the Ministry of Education.

Conclusion

The Oman education system has a solid foundation of curriculum to build on. Basic and Post Basic Education have a broad curriculum with Oman values woven into the design. Continued efforts to collaborate and compare Omani curriculum and assessment with that of like countries are critical to accelerate systems-improvement. The efficacy of this approach has already been demonstrated by the broad similarities observed when comparing Oman English, mathematics and science curricula and standards with five benchmarking countries.

The Curriculum Standards Project is responding to identified needs in a manner that reflects the Oman context and that takes account of views of international colleagues. Philosophy and curriculum design outlined in this project reflect contemporary practice.

The effective and efficient implementation of the well designed and strategically important Curriculum Standards Project is crucial to raising the quality of learning in Omani schools. The Ministry must ensure a coherent and co-ordinated approach to making it happen in ways that ensure the development of capability within the relevant Ministry of Education units (Curriculum, Technical Office, Human Resource Development and Education Evaluation), and the sustainability of inter connecting structures and processes established through the Project.

10.2 School Study Plan & Extracurricular Activities Components

10.2.1 How the system works

School study plans

School study plans are developed according to stipulated time allocations per week per subject according to grade levels. Using Grade 1 as an example, *The Guide to Basic Education* (2013) states the subjects and allocated periods for a 40 period week as follows: Islamic Studies (6), Arabic (12), English (5), mathmatics (7), Science (3), IT (1), Life Skills (1), Physical Education (2), Arts (2), and Musical Education (1).

An example from the other end of the school system is provided by the *Ministerial Decree No. 160/2007*, which outlines the rationale, study plan and subject allocations for post-basic education and a Study Plan for Grades 11 and 12. This illustrates how the Post Basic education programme provides students with a variety of academic tracks, based on the following assumptions:

- Students join Post-Basic Education with different backgrounds and capabilities in every subject.
- The skills and knowledge that Post-Basic Education graduates need differ in respect of their professional and academic futures.
- Higher education study requirements differ from those required to get a job immediately. They have specialization status and require special subjects.

Extracurricular activities

Awareness of the positive use of free time and how it can provide for the care and protection of children, while contributing to the implantation of moral characteristics within a framework of Islamic values and principles, is expressed within the Philosophy of Education. A programme of suitable extracurricular activities is seen as an important investment for the development of childrens' interests and tastes and their creative and innovative abilities. Important to note is that, although not part of the "official curriculum", extra-curricular activities (also referred to as 'activities') are a structured part of the school teaching and learning programme – all children and all classroom teachers must participate.

The *Events, Celebrations and Activities Guidebook* outlines the programme's seven objectives and suggested activities for extra-curricular activities and gives a brief rationale why it is an important

part of the curriculum. Extra-curricular activities are to link schools and expose children to environmental, social, health and internationalization opportunities, increase their loyalty to the homeland, and encourage them to take a broader view of the world. Activities such as school trips and competitions aim to reinforce the learning of curriculum subjects and incorporate aspects such as health, cultural activities, music, theatre and sport.

Schools are required to organize extra-curricular activities in line with the guidelines, and take into consideration age-appropriateness, permission of the parents and any safety requirements.

10.2.2 System Awareness of Issues and Challenges

A recurring recommendation in external reports for improving students' learning outcomes is the maximizing of the time students spend studying their courses by increasing the number of instructional hours/days to internationally accepted levels. This suggests that there is considerable time pressure on study plans due to a lack of classroom contact.

Although the specific concerns of this key issue relate to the study plans and extra-curricular activities components, they are raised here to support a wider evaluation discussion.

The Consortium affirms the value of a common curriculum with a clearly defined structure for all education systems, including Oman. The Consortium understands the perceived need at the time (the late 1990s) for a wider curriculum that both strengthened core subjects and introduced more relevant subjects, and the decision to focus on the development and distribution of student textbooks and teacher guides by subject and grade level (Ministry of Education 2007a). Research findings during the 1990s were clear that, for developing systems, adequate supplies of teacher guides and student textbooks, developed for the national curriculum of the country concerned, have a significant impact on student learning. This finding has not been superseded but it should be noted that it relates in particular to developing systems where there is a shortage of qualified, trained and experienced teachers.

Another point reported in many of the official documents presenting the aims and achievements of the educational reforms of the past 10-15 years, and making recommendations on their implementation (Ministry of Education 2004a & b; 2007a; 2008c p.70; Canedcom 2004, p.101), was that teachers should and would be encouraged to go beyond textbooks and make use of differentiated teaching and learning materials so students would be able 'to learn at their own pace and in their own way ....' (Ministry of Education 2008c,p.70). As the Omani teaching force has become more qualified and received more training it would be reasonable to expect that greater teacher flexibility has occurred and that differentiated teaching and learning has become a common pedagogical tool in Omani classrooms. With respect to the key issue under discussion here, it is suggested that a flexible teaching and learning approach is prevented by the highly prescribed and overcrowded curriculum in place in Omani schools.

In terms of the curriculum being *over-crowded*, the Consortium considers that it includes too many subjects for the time available for them to be taught to the depth required for students to meet learning standards through the key stages of schooling, and to provide them with the capabilities required for lifelong learning. While curriculum of some other countries include similar numbers of subjects, Oman stands apart to the extent to which each is taught separately (i.e. not integrated) and by a separate specialist teacher, even at the early grades. While not necessarily an issue in itself, this is exacerbated by the fact that there are fewer school days in the Omani school year than most countries in the world. This point has been reported widely over the past decade by external agencies involved in the development, implementation and review of the Oman education system.

In terms of the curriculum being *over-prescribed* the Consortium considers this is so in both content and process.Teachers have little or no flexibility over *what* they must teach or *how* it is to be taught. In international comparative terms the very high degree of prescription is unusual. It appears that the only non-prescribed part of the curriculum is that referred to as 'extra-curricular activities'. While not part of the "official curriculum", extra-curricular activities are a structured part of the school programme, all children and all classroom teachers must participate. So, although well justified and clearly of value, they place an extra demand on the school study plan.

Awareness of the issue:

In relation to this key issue, the evaluation has found that the system is partially aware of the challenges it faces in trying to achieve its desired outcomes for Omani learners.

Some awareness	The Consortium finds that the system has some awareness of the issue of an overcrowded and inflexible curriculum in some subject areas.

Study Plans:

The Directorate's *Development Workplan* developed in line with the 8th Five Year Strategic Plan (2011–2015), states as its third target mission, 'Preparing the educational plan for all subjects'. Achievements of the previous development period are reported as unifying the plan for Grades 11 and 12, raising the number of English lessons per week from five to seven, increasing the number of lessons in schools from 30 to 35. Difficulties in implementing the approved study plan are noted as being due to the number of official and unofficial school holidays, and the large number of 'projects, programmes and activities' (presumably extra-curricular) that affected the plan.

The 2012 NFER study reported that, compared with other countries, curriculum differentiation for students of differing levels of ability appears to be more limited in Oman, and that other countries provide a greater range of vocational pathways or subject choices to match the interests, abilities and aspirations of their students.

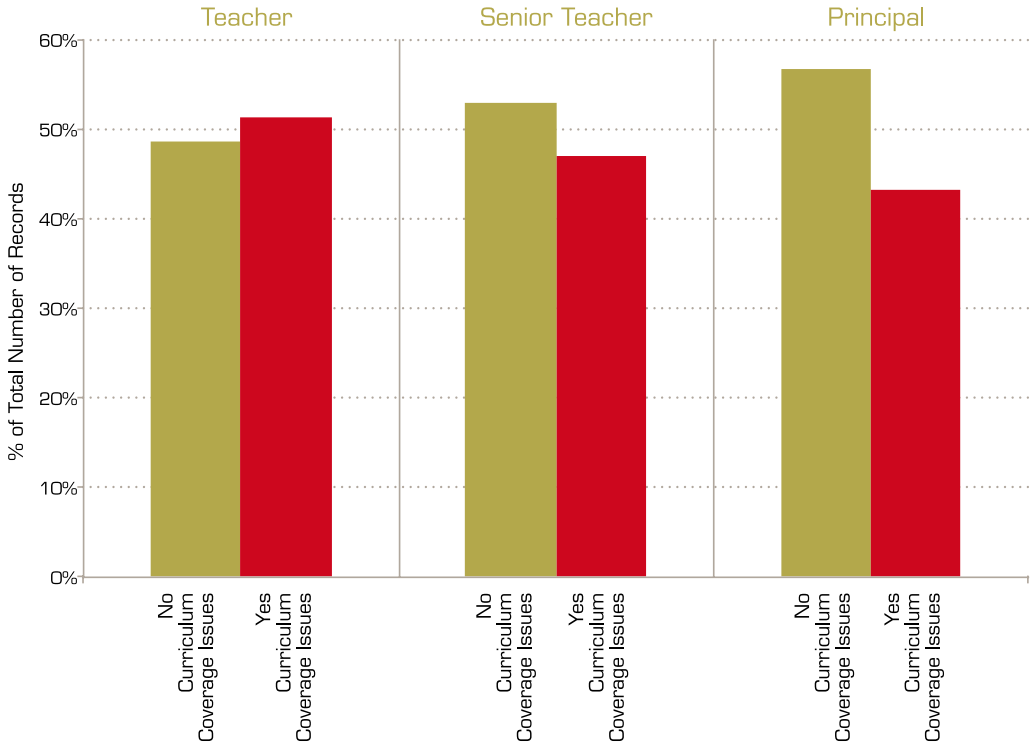
The concern regarding Post Basic education students being required to take too many subjects and the need for more flexible pathways was raised in the World Bank Report (2012) recommendations relevant to this component. The World Bank Report recommended reducing the number of subjects required in Post Basic education and building a flexible system that delays specialization, allows changes after specialization, and offers re-entry to learning after work experience.

Directly related to this component are the findings of an internal study, *Compatibility between content distribution and the actual teaching days & the difficulties of its implementation*, which indicates that the system leaders do have some awareness of the difficulties with curriculum delivery according to current study plans. The problem of curriculum overload is identified as causing a mismatch between content and the actual time allocated to teaching it. Another finding of the study is that technical and administrative difficulties impede the implementation of the content distribution plan.

The Consortium found that the extent to which schools find the study plan problematic in covering the curriculum varies between schools. In response to a statement on the online survey: There are enough teaching periods allocated in the school study plan for me to cover the curriculum in my subject, almost 73% agreed/strongly agreed, while 27% strongly disagreed/disagreed. The latter group represents a significant level of disquiet.

Principals, senior teachers and teachers interviewed during the Evaluation Project Team school visits revealed a higher level of concern about this in their responses to the question in the graph below. As indicated, around 50% for each group reported difficulty in their school in covering subjects in the periods allocated (51% of teachers; 47% senior teachers, and 43% of principals). This is more likely to be an immediate problem in the daily working life of a teacher than a principal.

Graph 10.1 **Did you/your teachers have problems covering their subject in the periods allocated?**

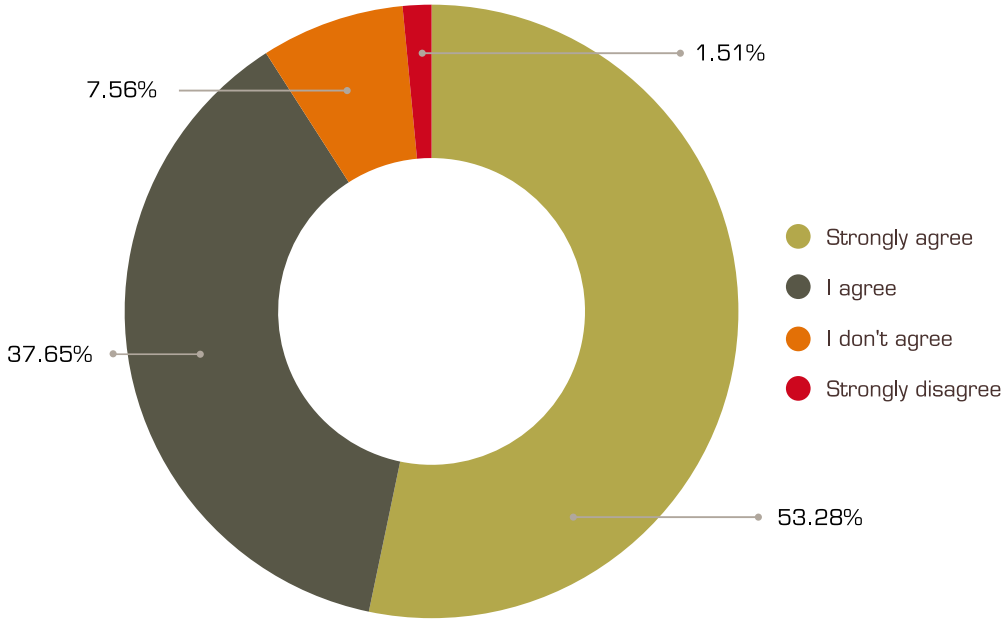


Source: Evaluation Project survey data 2013

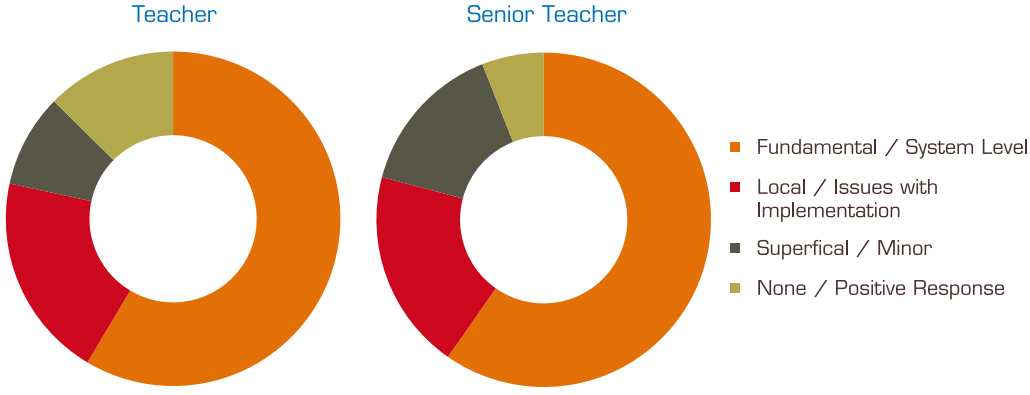
Another evaluation finding of significance here relates to teachers' ability to fulfil the study plan, and it is associated closely with the prescribed lesson-by-lesson nature of curriculum delivery for which the teacher guide and student text are essential teaching and learning materials.

As can be seen in the graphs below both the online survey and the school visits sought information on the curriculum materials provided for teaching and learning. In the online survey over 90% of teacher participants responded that the curriculum materials need to be revised and improved. School visit data reported that almost 80% of senior teachers and teachers respectively indicated fundamental concerns with the curriculum materials provided to teach their subject.

Graph 10.2 **The curriculum and learning resources for my subject need to be revised and improved**



Graph 10.3 **What concerns, if any, do you have with the curriculum text books and learning resources provided to you for your subject?**



Source: Evaluation Project survey data 2013

As part of the evaluation process the Consortium completed a set of calculations based on existing study plans by grade and subject. By considering the number of allocated lessons for each semester, and the stipulated lessons per week for each semester, against the days in the academic year required to cover allocated lessons, it is clear that the level of prescription is such that the curriculum is over-loaded for a number of subjects at certain grade levels, and under prescribed for some subjects and grade levels. The tables below illustrates clearly that for some subjects and grade levels the curriculum could not be delivered in the officially stipulated 31 weeks (154 days), even if every stipulated day of the academic year was spent in the classroom. The majority of other subjects and grade levels have a tight curriculum prescribed on 154 stipulated academic days.

Table 10.1 Examples of subjects by grade levels with over prescribed curriculum requirements (2012/2013)

Subject	Grade Level/s	Number of lessons allocated in curriculum for year	Number of stipulated lessons per week for subject	Weeks in academic year required to cover allocated lessons
Fine Arts	2	71	2	35.5
Music	6	35	1	35.0
English	3	237	7	33.9
Fine Arts	1 to 10	66	2	33.0
Music	5	33	1	33.0
Fine Arts	11 & 12	128	4	32.0
Islamic Education	1 to 7	160	5	32.0
Pure Mathematics	10	224	7	32.0
Applied Mathematics	10	224	7	32.0
Mathematics	5 to 8	223	7	31.9
Pure Mathematics	9	223	7	31.9
Applied Mathematics	9	223	7	31.9
Arabic	3	316	10	31.6
Islamic Education	8	158	5	31.6
Arabic	1 to 12	379	12	31.6
English	11 & 12	189	6	31.5
Science	5	132	5	26.4
Science	3	79	3	26.3
Music	12	96	4	24.0
Pure Mathematics	11	160	7	22.9
Pure Mathematics	12	160	7	22.9
Applied Mathematics	11	160	7	22.9
Applied Mathematics	12	160	7	22.9
Social Studies	5	90	4	22.5
Social Studies	6	90	4	22.5
Science	4	93	5	18.6

Table 10.2 Examples of subjects by grade levels with under prescribed curriculum requirements (2012/2013)

Subject	Grade Level/s	Number of lessons allocated in curriculum for year	Number of stipulated lessons per week for subject	Weeks in academic year required to cover allocated lessons
Science	12	106	4	26.5
Science	5	132	5	26.4
Science	3	79	3	26.3
Music	12	96	4	24.0
Pure Mathematics	11 & 12	160	7	22.9
Applied Mathematics	11 & 12	160	7	22.9
Social Studies	5 & 6	90	4	22.5
Science	4	93	5	18.6

Although some awareness is indicated of the problems that contribute to this issue and the challenges the system faces in trying to achieve its desired outcomes for Omani learners, there is less than full awareness of the problem per se.

Extra-curricular activities

An observation documented almost a decade ago by the Ministry of Education commissioned study (Canedcom 2004) was that:

> Principals and some regional office personnel report that the extra-curricular activities interfere with student progress in core subjects. While most would agree on the value of offering a period where students can choose options of their interest. Contests related to extra-curricular activities are run regularly and schools are judged on these contests. This has increased the focus on extra-curricular activities and away from core learning outcomes.

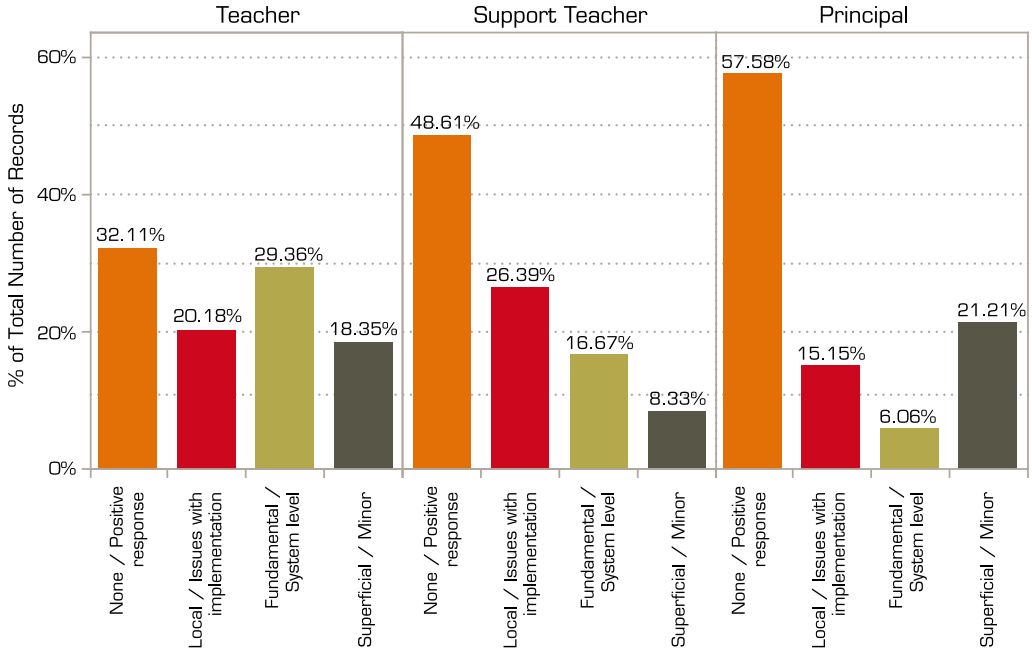
Recommendations were that:

- The minimum amount of time allotted to a subject must be met before students use regular class time extra-curricular activities, and that students who wish to pursue them be allowed to use the break and time before and after school hours.
- Extra-curricular activities be designed to relate directly to core learning outcomes, and that instead of awarding money for schools that win competitions it would be more appropriate to award money to schools that improve student achievement in core subjects.

More recently, a concern that extra curricular activities impact on curricular learning time was noted by the World Bank Report (2012).

Consortium findings suggest a mixed reaction to the place of the extra curricular activities programme. A majority of teachers (65%) of teachers agreed that extra curricular activities reduce the time allocated in the study plan for the teaching of their subjects. The data collated from school visit interviews with principals, senior teachers and teachers to this aspect of the school programme were mixed. While nearly 60% of principals and nearly 50% of support teachers had no concerns, fewer than a third of teachers were so positive.

Graph 10.4 **Do you have any concerns about the extra-curricular activities that are provided at your school?**



Source: Evaluation Project survey data 2013

It would seem that extra curricular activities are appreciated and considered a worthwhile component of the school programme by many. However their detraction from the already inadequate amount of time available to deliver the curriculum is clearly an issue for most teachers, to which the system appears to have only some awareness.

10.2.3 System Responses

The Directorate's *Development Workplan in the 8th Five Year Strategic Plan (2011–2015)* indicates the system response to the study plan issues identified is twofold: raising the plan for all grades from 35 to 40 periods a week; developing a revised plan for grades 11 and 12. The first of these responses appears to have been of limited effectiveness. Although providing more time to spread between curriculum subjects, it has not addressed the problem of there being too much to do in the time available for a number of subjects and grade levels. The second response does have the potential to address such issues at the senior secondary level.

The Consortium notes that options for the redevelopment of Grades 10 -12 study plans have now been developed and are currently being considered by the Ministry. The options have been developed to address the negative aspects of the current study plan such as:

- Too many subjects required of each student.
- Lack of balance between course content and allocated teaching time
- Insufficient pathways (academic and vocational) to meet the range of student abilities and interests
- Inadequate preparation for higher education and the labour market

Interventions being considered include reducing the number of required subjects, increased tuition time for key subjects and improved pathways to higher education and the labour market. Within the basic education programme, however, it will still be the case that the breadth of curriculum will prevent some subjects being covered in sufficient depth to prepare students to follow a more specialised curriculum in the Post Basic education grades.

In relation to the extra-curricular activities programme exacerbating the difficulties already arising from an over-crowded curriculum, the 8th Five Year Strategic Plan (2011–2015) includes the goal to 'Improve the efficiency of students' psychological, social, health and professional care and awareness programmes at schools'. This has resulted in the following development project: 'Increase the activation of school curricular and extra-curricular activities along with the efficiency of the school activity specialist to serve improving levels of education and learning'. This response indicates the desire to upgrade the extra-curricular activities programme. It does not recognise the issue outlined above.

It is clear that the extra-curricular activities programme is well grounded and validated within the Omani education context. It appears to provide many benefits to schools and students, and in itself is well regarded by the various stakeholders within the system. There is, however, a need for the system to recognise the issue of inadequate time for teaching and learning the official curriculum. These plans are appropriate for enhancing the extra-curricular programme and likely to improve its effectiveness and efficiency. They do not appear to take into consideration the issue that the programme is a contributor to the difficulties of an already overcrowded curriculum and the serious limitations on the time available to deliver it.

The planned Curriculum Standards Project's modular system discussed earlier in this chapter has the potential to address current study plan difficulties and embed the place of the extra-curricular programme in a considered manner.

System response ratings		
Appropriateness	**Effectiveness rating**	**Efficiency rating**
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

In summary:

Despite a number of less appropriate earlier responses with apparently limited co-ordination, the overall rating of appropriate is based on the planned Curriculum Standards Project and the current options being considered for Post Basic education.

In terms of the second dimension of effectiveness, the rating reflects the fact that it is too early to tell how well the responses will work. If the Curriculum Standards Project and the new Post Basic education pathways are developed in close co-ordination with internal and external stakeholders then there is a likelihood that the issue of an overcrowded curriculum can be addressed successfully.

Efficiency has been rated as not known. Insufficient information was available to the evaluators to assess this dimension.

Conclusion

It is clear that the current curriculum is over-crowded in terms of content expected to be covered within the time available and heavily prescribed in terms of what is to be delivered and how. A structured, common curriculum is of central importance to most school systems. There is much to commend in how the Ministry of Education has tried to deliver the curriculum by the current situation has some negative consequences for the quality of teaching and learning in school. The Curriculum Standards Project is the key mechanism for addressing the current problems/issues over-crowdedness and over-prescription.

10.3 Teaching and Learning Methodologies Component

10.3.1 How the system works

A pedagogical shift to student-centred learning approaches has been promoted since the Basic Education programme was introduced in 1998. In 2004 a specific programme for its development began. This was hailed in From Access to Success as follows,

> ...a new pedagogy has been introduced in the Omani school system. Education is now centred more on learners, using an approach based on critical thinking, autonomous learning and life-long learning, as opposed to conventional rote-learning (2006, p.20).

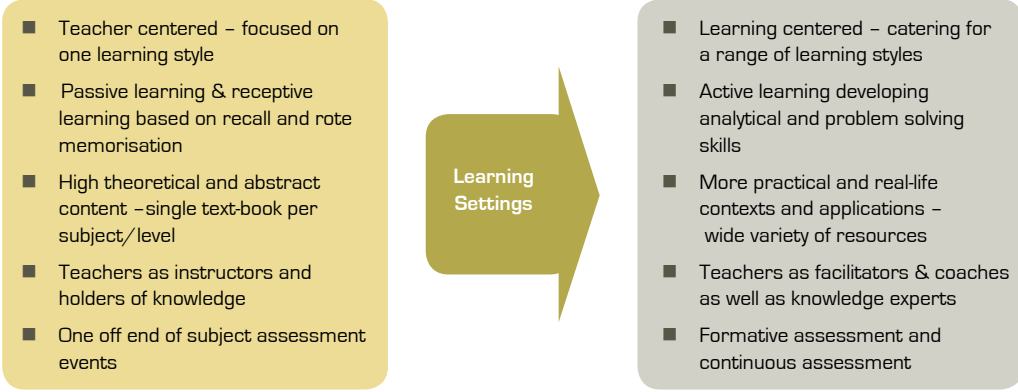
This shift reflected widespread international moves towards pedagogical approaches in which students were seen as active learners, needing to develop conceptual understanding and critical thinking skills. This approach was in contrast to students being passive recipients of information transmitted by the teacher through didactic, rote learning methods. A variety of terms are used to describe the new approach: 'child-centred', 'learner-centred' and 'student-centred' being the most common. The last is used here because it is the term employed most often in Ministry of Education documentation.

Aspect	Intended Outcomes Of Basic Education Reform Programme
Learner Settings Pedagogy, curriculum, assessment, class settings	The education reforms were aimed at: • Moving education to a learner- centred pedagogy. • Creating a flexible curriculum that links theory to real life application based on Islamic principles and Omani cultural identity. • Introducing new subjects, such as IT (information technology) and life skills. • Increasing the use of formative assessment and continuous assessment. • Meeting the needs of learners with special needs within mainstream schools. • Providing extensive learning resources with online access. • Reducing class sizes.

Many of the official documents presenting the aims and achievements of the educational reforms assert that teachers have been encouraged to move away from the 'traditional' teacher-centred methods, to a more 'progressive' approach centred on learners and their learning. Such an approach was expected to enable students 'to learn at their own pace and in their own way ....' (Ministry of Education 2008c, p.70; see also Ministry of Education 2004a; 2007a). To quote a recent NFER/CfBT study (Lofthouse & Whitehouse 2012, p.8), what this means in practice is that:

> Teachers are expected to use a variety of teaching methods such as individual, pair and small group working and out-of-school work. The approaches to subject learning are also aimed at developing skills of autonomous and cooperative learning; communication; critical thinking; problem solving; research and investigation; creativeness; innovation and development of aesthetic sense.

Desired shifts in teaching and learning in the Oman education reforms



These policy directions reflect the shift to the student-centred approaches promoted by international education reforms since the late 1990s.

The use of IT as a teaching and learning tool has been a key part of this shift in teaching and learning. Computers were first introduced into schools at the start of the basic education system in 1998 and expanded rapidly. Integrating IT with the learning outcomes of other subject areas was a key aspect of these early developments (starting first with Islamic studies and Arabic, then English, maths and science). Each year a new grade level of each curriculum subject and support materials was introduced until the basic education programme was covered up to Grade 10. With the introduction of the Post Basic education system in 2007 a number of elective courses in IT were offered 'to meet all students' abilities, needs and aspirations'. Customised IT for special needs students has also been developed.

The guiding principles/assumptions about IT in schools are as follows:

- All students should graduate from school with IT literacy understandings and skills.
- Teachers should not see computer literacy as a separate subject, the use of computer skills is developed best through meaningful integration in all subjects and computer use should support the existing curriculum.
- Schools need software applications appropriate to students' skill levels.
- Learner-centred activities best promote the acquisition of IT knowledge/skills.

- The acknowledgement that for students to derive full benefit, teachers and administrators all need to keep pace with the latest technologies. Technology should be led by the Ministry of Education putting in place 'an extensive, tailor-made and on-going professional development programme for its staff (Ministry of Education 2008a).

Oman's IT infrastructure in schools is reported as being quite impressive compared with developing systems elsewhere, with computers available in computer labs and learning resource centres and technical back-up generally available. Is is also reported that teachers receive regular skills training and that the IT curriculum encourages its use across all curriculum subjects. Limitations noted are that the connectivity of schools is uneven, and some teachers do not realise the learner-centred potential of IT (Ministry of Education 2012a, p137).

10.3.2 System Awareness of Issues and Challenges

In *From Access to Success*, the Ministry's commitment to a student-centred pedagogy was outlined. This document states that...

> ...a new pedagogy has been introduced in the Omani school system. Education is now centred more on learners, using an approach based on critical thinking, autonomous learning and life-long learning, as opposed to conventional rote-learning (2006, p.20).

For Grades 11 and 12 (Post Basic education) the 'core plus electives' model "emphasises the learning of key skills, or fundamental competencies, which will enable students to operate effectively in a wide range of contexts" (Al Balushi & Griffiths, 2013 p.117).

But as commented by Al Balushi & Griffiths (2013, p.116), despite the efforts of the past 10-15 years there is "... a gap between the Ministry's expectations and the realities of practice in the classrooms".

Partial awareness	The Consortium has found that the system is partially aware of the challenges and issues it faces in trying to achieve its desired shifts in teaching and learning methodologies. The issue is noted in some commissioned reports.

The embedding of the 'new' pedagogy is included in the Ministry of Education's vision for 2020 and it is understood that the use of student-centred learning practices is expected to be integral to any Ministry of Education provided teacher professional development course that is directly about or linked to pedagogy. The commissioning of two recent studies requiring attention to the effectiveness of teaching and learning methodologies, and its inclusion in the terms of reference for this evaluation, indicates there is some awareness of the issue. However there is no explicit Ministry of Education acknowledgement in recent policy and strategy documents made available to the Consortium that student centre learning is problematic in terms of the extent to which it has or has not replaced teacher-centred approaches.

A very recent report from the University of Cambridge (2013), which responded to a Ministry of Education request for an evaluation of various areas of education including student centred learning in training and practice, made a number of interesting findings based on school and classroom observations and interviews with a range of educators.

Positive observations were that, in general: students' attitudes to learning are very good – they are diligent, respectful and clear in their answers of questions; behaviour in class is excellent and relationships between teachers and students are also extremely good.

In those schools/classrooms where student-centred learning occurs it reported that:

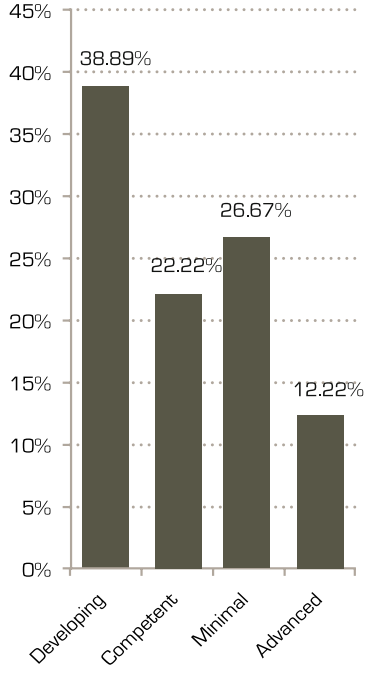
- Students enjoy their lessons and are highly motivated participants in their own learning.
- Teachers show that they are developing students' personal and social characteristics that promote essential life skills and support their ability to be effective independent learners.
- Teachers indicate that students are understanding their work and achieving higher grades.

Unfortunately it was noted that such classrooms were few in number and found almost entirely in Cycle 1 schools (2013, pp24-25).

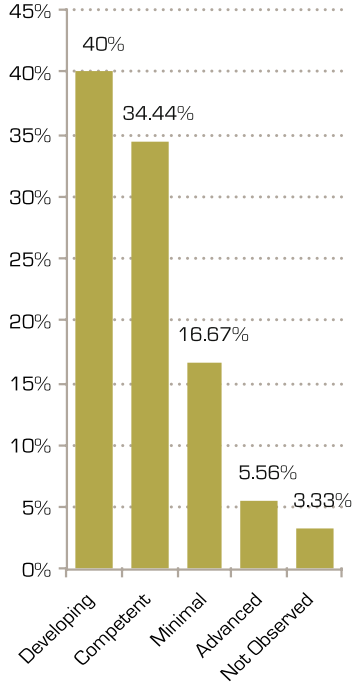
These findings are aligned closely with those of the Consortium visits to schools.In many classrooms teacher/student relationships were conducive to positive teaching and learning, Students were very well behaved and appeared to be enjoying their learning. Cycle 1 classrooms provided some good examples of student centred learning.

Despite teachers' own perceptions of their practices, Consortium Team classroom observations in general indicated that the expected pedagogical practice was very much in the process of developing with only a minority of teachers being judged competent practitioners of this pedagogy.

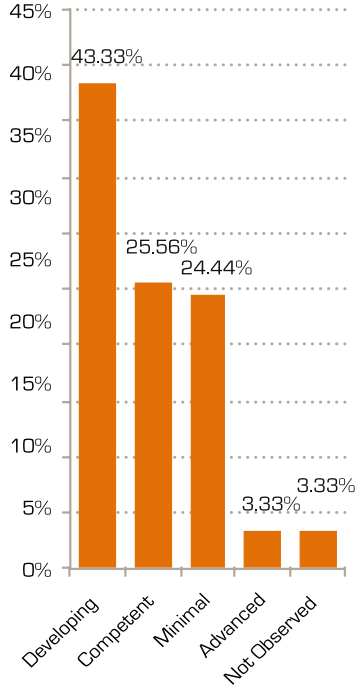
Graph 10.5
Engages and challenges students in active learning



Graph 10.6
Ensures students know and understand what they have to learn



Graph 10.7
Encourages students to think creatively and critically



Source: Evaluation Project survey data 2013

The two groups of observers both observed that although there were some instances of student centred learning in Cycle 2 girls' schools, in Post Basic schools teacher-centred methods were the norm and particularly so in boys' schools. To quote the Cambridge report (2012, p.23)

> "In nearly all lessons observed ... students were experiencing almost exclusively didactic forms of teaching. In such lessons the teacher talked from the front of the classroom, asked 'closed' questions to students and then, once the right answer was secured he or she moved to the next part of the lesson. There was very little attempt to determine whether other students agreed with answers, or of getting students to think more about what exactly they are asking about. Rarely was any attempt made to draw from students their understanding or probing into explanations or reasons for the answers that students gave. In nearly all cases, teachers accepted the first right answer and moved onto the next part of the lesson following the questions and information in the text book they were using. It was rare that teachers had either customised some of the work from textbooks to help slower learners or even given extension tasks to the highest achievers, or designed imaginative information or activity sheets for students generally."

The report authors also noted that, although there were differing viewpoints across schools as to the value of student centred learning, some principals and teachers recognised that it might raise academic standards and endeavoured to uphold it in practice as a means of "promoting students' personal, social and cultural development". However, most believed that "their single most important objective was to make sure they completed the teaching of the syllabus at the expense of all else" (2012 p.24). Thus they gave little attention to ways of ensuring that all students were making good progress in their learning because to do so would mean that for many students they would need to proceed at a slower pace and schools would need to adopt differentiated teaching methods. Different learning activities would have to be set for different students in the same class.

This finding is reinforced by Evaluation Project Team observations that student-centred and differentiated learning were familiar to and understood by teachers, but many teachers believed they were unable to practise them, as indicated by the following teacher comments:

- "We do not have time to teach the children - we have to rush through the curriculum or displease the supervisor" (Cycle 2).
- "There is a need for more differentiated teaching and learning – we teach to the average and we are not challenging students to take responsibility [for] learning" (Boys' Post Basic).
- "Teachers don't have enough time to teach the curriculum and it [becomes a choice] -coverage or deep learning" (Boys' Post Basic).

Further observations of the Evaluation Project Team members were the extent to which teachers at Cycle 2 and Post Basic schools *"blame the Cycle 1 schools and the ways they are teaching"* for perceived deficits in the knowledge and skills their students arrive with, their inability to keep up with the curriculum at higher levels and their poor performance in examinations. Yet despite the diverse learning needs presenting, the demands of covering the curriculum as prescribed are such that, *"teachers make clear the lack of flexibility in their approach – if students don't get what is being taught there is no chance to take a different approach or spend more time on it"* (Evaluation Project Team member Interview, 15/10/2013).

As reported by the University of Cambridge researchers, much investment nationally has occurred in the field of student-centred learning as a key Ministry of Education initiative of the last decade. Also stated is that despite the student centred learning initiative being in place in 2004, no research has been undertaken to ascertain whether the new approach is appropriate or has been effective in leading to the desired learning outcomes.

In terms of the system response to teacher needs arising from the student centred learning initiative the NFER/CFBT study concludes that 'Teachers have not had sufficient training to deliver the curriculum using a more student-centred approach and to foster crucial underpinning skills of analysis, enquiry and synthesis of information' (Lofthouse & Whitehouse 2012, p.15).

The Cambridge report also asserted that although teachers know that they are expected to engage in and facilitate student-centred learning, "teaching is currently dominated by a didactic approach to teaching and therefore students are passive learners" (2013, p.25). Moreover, that even in the Cycle 1 schools where student centred learning is the preferred way of teaching children, there is still need for workshops on differentiation strategies. Too often the demands on teachers from supervisors are such that they have neither the time nor capability to address the different learning needs of their students. That report also noted that although the use of student centred learning practice is required to be incorporated into any teacher professional development course involving pedagogy, "the use of such examples by the Ministry of Education Curriculum Department, regional training centres or the teacher training departments in universities ... remains rare" (ibid).

To support the recommendation "that teachers adopt student centred learning as the preferred method of teaching", the Cambridge report advises the updating of teacher training and professional development policies and strategies to ensure that the pedagogy underpinning the philosophy and objectives of education in Oman is well explained and standards of good teaching and learning practice are established.

10.3.3 System Responses

The Specialised Centre for Teacher Training, currently in the process of being established, is expected to address the issues and challenges surrounding student centred learning, and in particular the gap between the Ministry's expectations and the realities of classroom practice noted by Al Balushi & Griffiths (2011, p.116).

A deeper understanding of the issues and challenges is needed. Questions about student centred learning as an effective pedagogy for Oman should be explored so that decisions regarding pedagogic policies and strategies are informed fully by recent developments in the field, especially those related to education in developing and/or non-western contexts.

In recent years there has been much debate and discussion in international education literature to the promotion of curriculum and pedagogical reforms that pay insufficient attention to the cultural, structural and professional realities of the teacher and learner groups. The experiences of implementing student centred learning in many different cultural contexts have been well documented to be a challenging process in which, more often than not teacher-centred pedagogy remains embedded practice. Despite government and international development efforts in promoting such reforms, numerous studies show that practice in classrooms remains largely unchanged; that teaching and learning remains teacher-directed and didactic (Nykiel-Herbert,2004; Al-Daami & Wallace, 2007; Carney, 2008; Altinyelken, 2010).

The documented studies identify a number of recurring challenges that have been met in the implementation of student centred learning globally, many of which are reflected in the Omani experience. Schweisfurth's (2013) analysis of 72 student centred learning projects identifies key barriers to do with the nature of the reform and how it is implemented, limited material and human resources, and divergent cultural expectations of teaching and learning. Other factors identified include how students respond to the new pedagogy (O'Sullivan, 2004; Altinyelken, 2011) and the nature and adequacy of teacher preparation and professional development programmes (Ginsburg, 2010).

An important finding of particular relevance to the Oman context is that teachers can face contradictory demands arising from within the system. Examples in Oman include the imperative to complete a content intensive and tightly prescribed curriculum and the accountability arising from exam pressures, both of which work as disincentives to more time-consuming active learning methods (Leu & Price-rom, 2006). Related to this is Mohamed and Harlech-Jones' (2008) contention that the often idealistic 'top-down' focus on student centred learning can result in the practical and professional realities of the teachers being ignored. Research studies also demonstrate that while teachers often have knowledge of the pedagogical underpinnings of student centred learning and uphold its benefits and claim to use it in their practice, classroom observations often find their claims to be unsubstantiated. (This applies to many Omani teachers as demonstrated by Evaluation Project data). Some elements of student centred learning, such as group work and teacher-student interaction through questioning, do occur. However they are often found to be more for practical than pedagogical reasons (e.g. grouping students by ability) and superficial rather than substantive (e.g. chorused responses to simple recall questions).

The body of literature referred to takes different approaches in its consideration of effective pedagogies for the school systems under study, and how to address the various cultural contexts and structural constraints within which they are located. Some writers focus on further reform through improving teaching conditions (e.g. smaller classes, more material resources, better use of technology etc.) and providing more professional development. These are responses that, to an extent, have already been put in place in Oman and that the two studies recently undertaken in Oman recommend. Others propose that the reality of teacher resistance should be addressed by abandoning student centred learning. In 2005 the UNESCO Global Monitoring Report (p.154) acknowledged challenges with the

implementation of student-centred, discovery-based approaches in contexts where there are limited resources and traditionally held views about learning. It is suggested that a more structured approach is a more pragmatic option. Other studies advocate an alternative policy of teacher-directed instruction (Altinyelken, 2010; 2011; Dimmock, 2000; O'Sullivan, 2004). Alternatively, Fisher and Frey (2008) developed a model to facilitate the move from teacher-directed to student-centred learning, known as the 'gradual release of responsibility' model (Fisher & Frey, 2008).

Of particular interest to this discussion is the key finding of many of the researchers involved that the process of international pedagogical reform has unhelpfully polarised teacher-centred and student-centred pedagogies (for example, Barret, 2007; Ginsburg, 2010; Schweisfurth, 2011). In maintaining that this oversimplifies the complexities of a teaching and learning environment in which both approaches are required, they challenge the teacher-centred versus student-centred binary. Based on close examination of teachers' values and ideas about teaching and learning, and how they put them into practice in the face of reforms promoting student centred learning as the preferred pedagogy, they find that teachers' "pedagogic palette is mixed" (Barret, 2007 p.292).

The notion of 'mixed pedagogies' (McPhail, 2013) suggests that reform interventions need to acknowledge that pedagogy is more than a simple binary, or an unproblematic progression from 'traditional'/teacher-centred to 'progressive'/student-centred classroom practices. It is contended that those driving the reforms should accept that existing pedagogical beliefs and practices tend to be informed by deeply embedded social and cultural environments, institutional norms and structural conditions (Tabulawa, 2003) which "provide teachers with the basis for a purposeful assessment of their classroom options" (Guthrie, 2011 p.63). These writers maintain that it should not be assumed that teacher-directed classrooms means students are passive, or that teacher-directed pedagogies are not effective in promoting cognitive development through intellectual enquiry and critical analytical skills among school students.

The mixed pedagogy approach is based on the selection of certain elements of both teacher-centred and student-centred approaches. Rather than try to replace one approach with another, it proposes that the mix of elements from each approach is improved by building on what already exists within a particular context, and as appropriate to the different stages of schooling. The elements of 'traditional' teaching affirmed by this approach are those associated with "strong and explicit instructional guidance" (McPhail 2013, p.122) : well defined and sequenced curriculum content; teachers with specialist subject knowledge; and preset learning goals with clear evaluative criteria of which both teacher and students are well aware.

Those elements associated with the 'progressive'/student centred learning approach recommended for inclusion in the mix are:

- The need for 'pacing' student learning, that is, accepting that some students will need a number of learning opportunities in order to attain the knowledge required.
- Teachers who are 'authoritative' rather than 'authoritarian', that is, they use their advanced subject knowledge to provide the feedback and guidance students need to reach the pre-set learning goals.
- Teachers who engage their students through a personalised approach to learning within a positive classroom environment.

It is acknowledged that the Omani commitment to student-centred learning over the past decade is reflective of the global 'education for development' agenda of the time.

System response ratings		
Appropriateness	Effectiveness rating	Efficiency rating
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

In summary:

The rating of **partially appropriate** has been given despite the political and technical understanding that the 'right response' was being pursued. It was judged as only partially appropriate because there is still some way to go in order to address its appropriateness to the Omani context.

The **partially effective** rating for the second dimension reflects the observation that, although the response has not been effective for many schools/teachers, it has worked for teaching and learning in many Cycle 1 schools despite structural and other constraints.

The **mixed efficiency** rating is based on the fact that the human and financial resources committed did lead to achievement of some, albeit limited, outputs/outcomes.

Conclusion

The Omani education context lends itself well to the timely development of a mixed pedagogy approach. The forthcoming work of the Curriculum Standards Project, the Assessment Centre and the Specialised Centre for Teacher Training could include this as a collaborative undertaking. There is much in the Omani school system that could be built on and improved by taking this approach. Supporting factors include an established preference for a well-defined and sequenced curriculum; a body of subject specialist teachers; moves towards the establishment of clear learning goals and evaluative criteria; and, most significantly, schools in which teachers and students enjoy a positive teaching and learning environment and relationship.

10.4 Assessment Systems and Processes Component

10.4.1 How the system works

In all countries educational assessment is an important mechanism for indicating how effectively the national system is performing in terms of achieving its goals and objectives. It provides essential information for decision-making to all involved in the process of ensuring student learning matches the expectations of all stakeholders – from system leaders to classroom teachers. The key function of assessment is the systematic gathering, analysing and interpreting of evidence about what students are learning and how well they are learning.

Student assessment is the responsibility of the Directorate of Educational Evaluation which is located in the General Directorate of Educational Planning and Human Resources and comprised of three Departments: Test & Examination Administration; Academic Attainment Evaluation; Certificates and Qualifications. The 8th Five Year Strategic Plan (2011–2015) defines the function of the Directorate 'to increase the efficiency of student performance evaluation and the level of their skills in order to meet the quality of work'.

The Ministry has prescribed four forms of assessment:

- Formative assesment set and marked at the school level.
- Summative assessments (Continuous Assessment) set and marked at the school level.
- G5 to G9 summative assessments set and marked at regional level at the end of each semester.
- G10 to 12 summative assessments set and marked at the national level at the end of each semester.

A comprehensive system for continuous assessment, including both formative and summative tools and procedures, has been in Basic Education schools since 1998. It was introduced in response to recommendations in international reports and to support Omani education aspirations. It was seen as providing a mechanism for the two main purposes of assessment: to assess the performance of students and identify where they need extra support, and to monitor national standards. The *Mathematics Continuous Assessment guide* defines continuous assessment as 'the assessment activities practiced outside or inside the classroom to ensure that the student is achieving the expected level in learning through using different assessment methods such as: projects and research, writing and artistic activities, practical exam, and quizzes'.

In Cycle 1 schools the focus is on internal formative and summative assessment using a broad range of evidence including written work, classroom observations and tests. Determination of student performance in Grades 5-12 is calculated by an accumulation of results over the academic year. The accumulation starts in Semester 1. Results from continuous assessments and the end-of-first-semester-examination in January are collated into an overall result out of 100 for each student in each subject area. Overall results below 50 are rated 'fail' and results at or above 50 are rated 'pass'. Semester 1 and 2 examination results have the same weighting when calculating the overall average for the year.

The Attainment Evaluation Department is responsible for issuing guidance to teachers on all aspects of assessment, from formative assessment through to continuous and summative assessment.

The General Document of Students' Learning Assessment Grades 1-12 provides appropriate descriptors and guidelines for grades 1-12 assessment including:

- Continuous assessment: concept, principles and tools.
- Student portfolios.
- Rewarding marks.
- Reports and certificates.
- Rules for passing and repeating.
- Moderation.
- Assessment for adult education.

Additional general assessment documents for the different levels of schooling offer guidelines on topics such as: student semester report expectations; preparing remedial plans for students who do not pass, how student scoring occurs and how points are allocated for passing/failing; second session examinations, repeating classes and moderation processes; giving feedback to students and gathering, recording and using assessment information.

It is clear that the documentation of the purposes of assessment, types of assessment (including peer assessment, student self-assessment), recording of informal and formal assessment, feedback and use of assessment information is comprehensive.

The *General Assessment Document* specifies the requirements for various aspects of assessment.

Reports and Award of Certificates is structured as follows: for Grades 1 to 4, four performance reports per year are to be issued; for Grades 5–12, four performance reports per year are to be issued; for successful completion of Grade 10, a Certificate of General Basic Education is awarded, and upon completion of Grade 12 a Diploma of General Education is awarded.

In terms of progression the following applies:

- At Grades 1–4, all students should progress through the levels, with remedial plans put in place if a student is in receipt of an 'E' grade.
- For Grades 5–11, examination and continuous assessment marks are factored into the final grade. If a student scores an E grade for a full-year result (mean of two semesters) in up to three subjects from Islamic Education, Arabic, English, Science, Mathematics, and Social studies subjects, they are allowed to take a second session examination (only for the semester in which the student failed the subject(s)). If a student scores an E grade in one subject or more they must repeat the year.
- For Grades 5–11, if a student scores an 'E' grade for a full-year result in the above subjects, they must repeat the subject. If a student is scores an 'E' grade in more than three subjects they must repeat the year.

- For Grades 5 – 11, 'E' grades in drawing, sport, music, life skills and information technology do not affect a student's ability to progress up a grade. In Grade 11, students are allowed to take a second session examination in these subjects.
- If a student repeats a year and is graded with three or more 'E's when repeating, the student is permitted to progress with a remedial plan in place.
- In Grade 12, a student must pass all required subjects with a minimum 'D' grade to gain the General Education Diploma.
- In Grade 12, students who are graded 'E' for a full year (mean of two semesters) in 3 subjects or less, are allowed to take a second session examination. If a student scores 'E' he/she must repeat the year.

Continuous moderation is applied for Grades 1 – 12 in a single school or a group of schools. Subject teachers meet to discuss students' work in order to reach a shared understanding of common standards for assessment and evaluation. Final moderation of Grade 12 is administered through the follow-up process at the end of each semester by the educational governorates under the supervision of the Directorate General of Educational Assessment. This is achieved through visiting all grade 12 schools to ensure that the tools are being implemented correctly and to check that students' scores for continuous assessment meet the required standards.

10.4.2 System Awareness of Issues and Challenges

Every education system faces the issue of ensuring alignment between assessment and curriculum, pedagogy systems and processes.

The Ministry of Education documentation of the various assessment systems and processes, including the function and purposes of assessment, types of assessment (formative and summative) recording of informal and formal assessment, feedback and use of assessment information, is very comprehensive.

A very recent study (University of Cambridge, 2013) concluded that at a policy and strategy level assessment systems are good and fit for purpose. In relation to their implementation in the classroom, however, they found that the variation in practice and effectiveness of assessment processes raises issues and introduces barriers to improvements in learning outcomes.

The Evaluation Project Team, particularly in the second and third visits to a range of schools, found that concerns about the non-alignment of curriculum, pedagogy and assessment were raised frequently.

The evaluation has found that the system is partially aware of the challenges it faces in trying to ensure that assessment practices align with curriculum.

Some awareness	The Consortium has found that the system is partially aware of the challenges and issues it faces in ensuring that assessment matches the knowledge and skills specifications for students set out in the prescribed curriculum.

The 8th Five Year Strategic Development Plan indicates its focuses of concern regarding assessment issues and challenges in its setting of the following strategies and activities:

- Develop the system of evaluating student performance.
- Develop knowledge development programme.
- Participate in international studies to evaluate student performance.
- Develop national tests of school achievement and continue implementing them.
- Form a question bank.
- Implement the automatic correction project.

Although these are all very important dimensions of assessment, none is explicit in its recognition of the issue of alignment of assessment to the curriculum and the need to find ways of addressing the challenges it poses in terms of improved student learning. A level of awareness is clear, however, in the commissioning of two recent studies. The first required attention to the interface between curriculum and assessment (Lofthouse & Whitehouse, 2012) while the brief for the second (University of Cambridge, 2013) included a focus on formative assessment in practice in the classroom. Many of the assessment-related findings of these two studies are reflected in data collated by the Consortium.

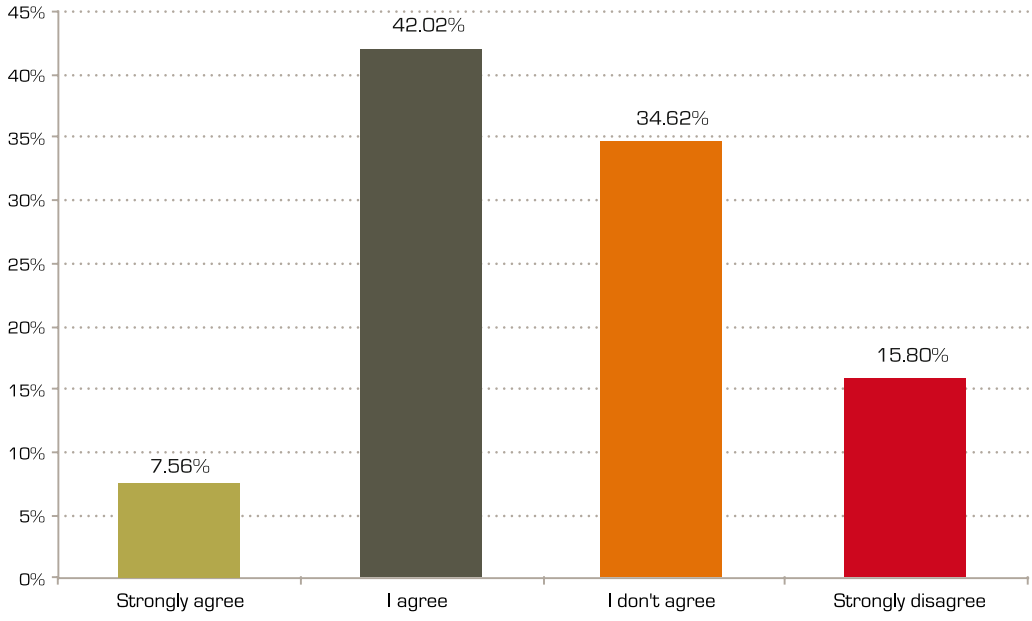
It is reported that in recent years the Assessment and Curriculum Departments have attempted to work together more closely in the development of the Teacher Guides.

A key finding of the former study was that the system's ability to work effectively and efficiently towards improvement in curriculum delivery and learning outcomes is hampered by the separation of the Curriculum and Assessment Departments in terms physical location, communication and reporting. It is understood that there are logistical reasons for the physical separation of the two Departments but it is unclear why greater efforts are not made in terms of communication and reporting systems.

It is reported that in recent years the Assessment and Curriculum Departments have attempted to work together more closely in the development of the Teacher Guides. Some Assessment staff have also taken a role in advising Curriculum teams on the development of new Scope and Sequence documents but that this varies across subjects. The Curriculum Department leads the process which is supposed to be undertaken by a team of four, being representatives from Curriculum, Assessment, Supervision and a teacher, but this is not always adhered to in practice.

Particular attention was given by the University of Cambridge to the fact that the guidelines document for teachers on assessing the curriculum was developed by Assessment with little or no collaboration with Curriculum. This, so it is reported, means that in some subjects "what is being assessed is not what is being taught". The mismatch between what is assessed and what is in the Teacher Guide is attributed by the Assessment team to the lack of clarity in the learning objectives/outcomes included by Curriculum colleagues in Teacher Guides (Lofthouse & Whitehouse, 2012 pp38-39), with the implication that their (Assessment's) approach is more in tune with what teachers need. This is not supported by the findings of the online survey conducted by the Consortium. Many teacher responses resulted in an overall positive response rate (generally 70-80%) about various factors that impact on classroom teaching practices. More than half of those responding gave negative responses to the statement posed in the survey about Ministry of Education provision 'of good quality assessment materials to use in my subject'.

Graph 10.8 **The Ministry of Education provides good quality assessment materials to me to use in my subject**



Source: Evaluation Project survey data 2013

Both the NFER/CfBT (2012) and Cambridge (2013) reports had comments of interest to the Consortium. The former reported that:

> Continuous assessment is still relatively new to Oman and not all stakeholders value it, some parents are concerned it does not give an accurate view of student performance .... Whilst continuous assessment has provided a framework through which teachers can assess the progress of their students, concerns were expressed that student marks for continuous assessment remained higher than those gained in regional and nationally set summative tests (Lofthouse and Whitehouse, 2012 pp15-16)

The latter report commented that "at all levels in the system there was a lack of confidence in the results (i.e. students' grades) produced by continuous assessment" (p.8).

This is supported by Consortium reporting of comments from school principals and teachers, such as, *"Students say there is no alignment between continuous assessment and summative assessment"* (Cycle 2 school), and *"Teachers and leaders claimed that there is a problem with their continuous assessment tools … because the criteria are not clear"* (General Education school)

As stated earlier, the brief of the University of Cambridge study included the review of formative assessment practice in the classroom and it was this aspect of continuous assessment that was of particular concern. To quote (2012 p.6), "Of all the assessment systems in place, this is arguably where the greatest disparity between what is envisioned and what actually happens in the classroom can be seen".

The reviewers continue:

> A primary purpose of the Continuous Assessment was to introduce formative assessment into classroom practice. We strongly support this; the evidence is clear that if well used this can have a strong and positive impact on both engagement and increasing learning outcomes. However, in practice we found that continuous assessment was used as a summative assessment (ibid).

The Consortium findings support the Cambridge reviewers that school leaders and teachers all need a clear and common understanding of formative assessment or this situation will continue. The two review groups also agreed that there were some cases of good formative assessment practice but that most understood it as no more than regular marking of student work. The Cambridge reviewers also noted that for formative assessment to be practiced and to have a positive impact, a higher priority must be given to the notion of feedback as the means of improving teaching and learning.

These comments are reinforced by that of the NFER/CfBT authors as follows:

> There was also little evidence found that suggested continuous assessment was being used for formative purposes, to identify students' strengths and weaknesses and address them. Although differentiation of learning in mixed ability classes was universally accepted as an important principle, it appears that teachers do not have the time or the training to do this effectively (Lofthouse and Whitehouse 2012 p.16)

The importance of formative assessment as a potentially powerful factor in enhancing the quality of teaching practice and student learning outcomes is well established in international research literature (see Hattie 2009; 2012). The model developed by Hattie (2012 p.115-6) to ensure that the feedback provided works for students, emphasises that it must address 'the gap' between where students are in their learning (what they have already achieved), where they need to be in their learning (the intended outcome) and how to get there (the teaching plan). Hattie also details how the results of the summative assessments (tests etc.) undertaken can be used formatively by teachers to differentiate what and how they are teaching to meet the learning needs of student as revealed by the summative assessment information.

10.4.3 System Responses

In the past decade there have been many educational assessment focused forums, meetings, seminars and evaluation studies. They include the Project of Developing the Students Learning Assessment conducted in accordance with the Ministerial Decree (64/2002), the Educational Assessment Symposium (April 2003), the First Educational Assessment Forum (April 2004), the Second Educational Assessment Forum (2005) and the Private Educational Meeting to discuss the General Document for Assessment (7 – 8 May, 2011). In addition there have been other meetings and workshops to discuss issues such as:

- Addressing weaknesses and enhancing strengths.
- Upgrading students' performance.
- Student self-assessment.
- Assessing all learning processes not just cognitive learning.
- Promoting higher learning skills
- Taking into account student differences.

It is clear that the Oman Ministry of Education recognises the importance of the contribution assessment systems and processes have in developing and sustaining a high quality, fair and just education system. It is also clear that the Ministry responds to the issues and challenges surrounding them in an appropriately strategic manner.

The most recent and significant Ministry of Education initiative responding to assessment issues and challenges is the tendering of a Terms of Reference for a National Assessment and Examinations Centre (1-12). International educational companies or organisations are invited to assist the Ministry of Education in establishing an Assessment Centre that will ensure the development and delivery of a robust assessment and qualifications system which is valued and respected both nationally and internationally. The Terms of Reference includes four components: Strategy and Design of National Testing and Examination Procedures; Oman Qualifications Framework; Statistical Analysis and Research, and an Online Platform (Ministry of Education 2013b).

The Cambridge report (2013 p.8) recommends an extensive professional development programme for teachers, school leaders and staff in the regional centres [presumably technical supervisors] on the benefits of formative assessment and the ability to evaluate it in practice. It is suggested that knowledge, understanding and skills in formative assessment as a key factor in improving student learning requires a more co-ordinated approach across the structures of curriculum, pedagogy and assessment at central, regional and school levels than what is recommended.

The possibility that the important dimensions of assessment of and for student learning could be addressed and developed in ways that maximise the achievement of desired outcomes by Omani learners, arise from emerging responses to issues and challenges elsewhere in the Ministry. The co-ordination of developments and activities within the planned Specialised Centre for Teacher Training and the Curriculum Standards Project so that formative assessment becomes established effectively and efficiently in schools should be a priority.

System response ratings		
Appropriateness	Effectiveness rating	Efficiency rating
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

In summary:

The overall rating of appropriate is based on the current major initiatives to establish an Assessment Centre, a Specialised Centre for Teachers Training and Curriculum Standards.

The likely to be effective rating is assigned because while it is too early to tell how well the collective responses will work, there is significant evidence within the system that these initiatives have been investigated well and researched in terms of Oman's needs and international best practice.

The mixed efficiency rating for this issue is based on the high level of external technical assistance, thus high cost. This, however, is seen as an investment which is necessary to meet current needs. What is important is that local capacity and capability is built during this project so this important intervention becomes sustainable within Ministry of Education resources.

Conclusion

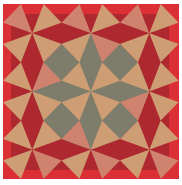
If desired learning outcomes are to be achieved by Omani learners it is essential that the planned activities of the various units serving schools in terms of the curriculum, its delivery and assessment, are aligned in their efforts. The establishment of effective formative and summative assessment practices in all schools and classrooms is possible if an appropriate and efficient collaborative approach is committed to, planned for and put into action.

It is crucially important to ensuring high quality learning outcomes that assessment as a structure of schooling is recognised as integral to wider school improvement processes and connected closely to the other two key structures of schooling – curriculum and pedagogy. For assessment to fulfil its key function and purpose it is dependent on the establishment of clear and measurable outcomes of student learning (curriculum), and ensuring that students have the conditions and opportunities to achieve those outcomes (teaching and learning).


خريطة العالم الطبيعية

CHAPTER 11

RELEVANCE



The Terms of Reference for the Ministry of Education Evaluation Project (Grades 1-12) required evaluation of the following in relation to the Relevance aspect:

Meeting the needs of higher education and the labour market including:

- Appropriateness of courses, curriculum content and services.
- The extent to which soft skills such as lifelong learning and good citizenship are developed.
- Appropriate ways to encourage and develop entrepreneurship skills.

Summary

Oman's Post Basic secondary education system has been designed around the required skills, knowledge and personal attributes necessary to supply the higher education institutions and the labour market. The system of curriculum, teaching and support strives to provide students who possess the required knowledge, skills and attributes necessary for entry into higher education and the workplace. Despite this design, both employers and higher education institutions believe the students presented to them do not meet their expectations and requirements.

The Ministry of Education is well aware of this gap between the abilities of current graduates and desired graduates. It has implemented a number of international best practice initiatives and has further significant initiatives underway. The initiatives currently underway if successfully implemented are likely to address a number of issues and challenges needed to close the gap.

These initiatives require a close and effective engagement with a range of external stakeholders. External stakeholders are indicating that they regard the first steps to a successful engagement are to strengthen communication, collaboration, and partnership between the Ministry of Education and themselves.

Higher Education stakeholders state strongly that both curriculum and teacher quality are issues to address. However, they also state they are prepared to assist in finding a solution in any way possible.

Industry advocates strongly that the solution for the labour market is for the expansion of technical-vocational education curriculum from Grade 10 onwards. However, they also acknowledge that to be successful this will require their support to provide working experience outside the school as well as options for on-job training opportunities tied into curriculum outcomes for Grades 11 and 12.

Higher education and labour market external stakeholders parties express the view that to ensure the appropriateness of courses, curriculum content and education services to the needs of the labour market and higher education the following is required:

- Partnership, effective engagement and improved communication between all sectors.
- Increased flexibility, creativity, and imagination within the curriculum and its teaching.
- Development of individual student capacities and capabilities through an expanded but integrated approach to academic and applied options.
- Immediate joint actions to implement the above.

11.1 Background

In considering this aspect it is necessary to put 'relevance' in the context of the Oman labour market. That is, the key consideration of the Relevance aspect is how well school leavers are being prepared for the working and economic environment they enter in the post-school environment. The issue of human capital development is at the core of this determination.

The criteria by which to measure the state of readiness of young people as human capital, is established through a consideration of the stock of competencies, knowledge, social and personality attributes (including creativity), required to perform labour that produces economic value. Human capital development is explicitly connected to education, and the role of human capital in economic development, productivity growth and innovation is critical to the future of Oman economic prosperity.

A particular problem in seeking to understand the needs of human capital development of the labour market for both students and educational decision-makers is that the benefits of educational investments only become evident in the future. The optimisation of education and training decisions is dependent on estimates of future labour requirements in the economy. The productive yield of the school leavers' human capacity potential is difficult to isolate and measure.

Human capital built up initially by education in the schooling system undergoes various changes after entry to the labour market. Many of these changes are difficult to measure, such as the increase in knowledge and skills as a result of increased experience in successive jobs and of various forms of training within or outside the firm. Equally, the loss of knowledge and skills that results from lack of use in the event of unemployment or under- utilisation does not lend itself to measurement.

Similarly the decision to enter further education is dependent on educational achievement and academic attainment during formal education. Success in higher education that contributes to human capital development and utilisation is dependent on school leavers accessing the learning pathways best suited to their achievement to date and the environment in which this capacity will be utilised. Understanding if a student is better suited to a vocational pathway as opposed to academic pursuit is a critical decision, that if made inappropriately, can waste considerable resource and slow human capital development.

In considering the relevance of the current school curriculum and education services for those facing employment, vocational or higher educational choices, consideration has to be given to what labour market information is critical to facilitating decisions on investments in education. This necessarily means consideration of the current workplace environment and the economic system of Oman. Decisions about educational provision can then be determined in the light of knowledge of the opportunities existing and whether or not the balance of offerings in the system prepares school leavers for their future positions.

Data collection considerations

This chapter has relied on information obtained from a review of the current collection and analysis of data and indicators associated with education and the labour market. The Evaluation Project Team has encountered significant information limitations but has gathered data in some areas that is sufficient to provide measurements that could be standardised into internationally recognised, comparable education and labour market indicators. However, important gaps persist in Oman education, training and labour statistics and this has limited the ability of the Evaluation Project Team to carry out an in-depth study of the relationship between work and education and training.

In respect of the movement from education to employment, no comprehensive data was officially available from government agencies on the skills and knowledge required for employment, or on the performance of specific education providers in delivering to these requirements. Oman specific data is limited and, therefore, cannot be compared against data from other countries.

Another significant challenge in collecting a comprehensive data set is the fragmented nature of job-training systems and schemes that exist in Oman for school leavers. Skills training takes many different forms and is provided in Oman by many different stakeholders including vocational schools, universities, companies, industry associations, and local and national governments. Often, multiple entities are involved. For example, in the government sector responsibility is typically shared among education, labour, and industry ministries and organisations.

Stakeholder Engagement

During the study, the Evaluation Project Team met with a range of external and internal stakeholders to investigate the 'Relevance' aspect. For the most part, these stakeholder meetings involved small groups of people with an investment in and/or views of the qualities sought in secondary school leavers.

Examples of the groups that participated in the focus groups on the Relevance aspect included, but was not restricted to:

System Stakeholders

- Majlis Al Shura Education Committee.
- Majlis Al-Dawlah Education Committee.
- Education Council.
- Ministry of Education.
- Ministry of Higher Education.
- Ministry of Manpower.

Tertiary Stakeholders

- Sultan Qaboos University.
- Sohar University.

Industry Stakeholders

- Chamber of Commerce.
- Omantel.
- PDO (Petroleum Development Oman).

Data collection method

Focus groups were used for collecting qualitative data from stakeholders. The focus group method involves a group interview that capitalises on communication amongst the participants to generate data. Although group interviews are often used simply as a quick and convenient way to collect data from several people simultaneously, they also explicitly use group interaction as part of the method. People were encouraged to talk with one another, ask questions, exchange experiences and comment on each other's experiences and points of view.

It should be noted that most of the focus group activities were carried out in Arabic, facilitated by a member of Evaluation Project Omani technical team who had received training for such focus group interactions.

Stakeholders participating in the focus groups were provided with structured questions that elicited viewpoints on the following topics:

1. Key challenges facing the Grade 1–12 education system.
2. Important areas of the Grade 1–12 education system from the stakeholders perspective.
3. Perceived required future improvements.
4. Past and present performance school leavers.
5. The role school examination results play in their selection processes.
6. Ministry of Education engagement processes and areas of engagement with them as stakeholders.
7. Their desired areas for future engagement with the Ministry of Education.

In addition to these questions, the industry stakeholders were asked to discuss a range of industry specific topics including:

1. Evaluation procedures used to assess whether school graduates met industry specific employment entry requirements.
2. Quality of Post Basic school graduates in first employment roles.

The higher education and industry stakeholder groups also discussed the following:

Do new school graduates consistently display the following skills?

- English proficiency.
- Arabic proficiency.
- Data gathering/analysis.
- Numerical ability/math skills
- Problem solving.
- People management.
- Motivation/work ethics.
- Oral communication skills.
- Written communication skills (i.e., writing a report).
- Teamwork.
- Leadership.
- Creativity/entrepreneurialism.
- Flexibility/mobility.
- Cultural awareness.
- Computer literacy.
- General knowledge.
- Practical experience.

11.2 The Oman Labour Market Environment

Relevance of the Oman Ministry of Education's schooling system must be considered in respect of the socio-economic context of Oman, its plans for economic growth and measures of its success to date.

Socio-economic context

The total population of Oman reached 3.8 million in 2010 with a rapid growth rate of 3.1%. At this time, 70.5% were Omanis. Females constituted two-fifths of the total population (41.9%) and around half of the Omani Population (49.4%). Sixty-one per cent[1] of the Omani population are in the age group (15–64) years with those under 25 accounting for 51.5% of the population and children under 15 years of age accounting for 35% (2013). The age distribution for the total population differs due to the effect of the expatriate labour force, where children below the age of fifteen years constitute 28% in comparison to 70% in the working age group (15–64) years.

The Sultanate consists of 11 governorates. Its major products are crude oil and refining, liquefied natural gas, construction, cement, steel, chemicals, optical fibre and copper. Most of these were developed in the early 1980s to diversify the economy. Sustained high oil prices in recent years have helped build Oman's budget, trade surpluses and foreign reserves. The GDP per capita (PPP) has reached US$15,259.

Oman has a historic dependence on foreign labour that has developed through reliance on expatriate skills and cheap unskilled labour at wages unattractive to native Omanis. The negative consequence of this is a large transfer of money out of Oman by foreign workers, and little benefit to the nation in the transfer of knowledge and technology.

In 2011, the Sultanate entered a new phase in the consolidation of its national economy. A number of Royal orders and decrees were issued by His Majesty Sultan Qaboos bin Said that were aimed at diversifying the economy and reducing the high level of economic dependency on oil production.

1 Oman National Centre of Statistics and Information

Royal Decree No. 1/2011 stipulated a number of economic goals, including:

- To achieve annual national economic growth of not less than 3% at fixed prices through stimulating domestic demand.
- Increase exports.
- Encourage investment.
- Produce a strategy for boosting productivity.
- Make the best possible use of natural resources, productive capacity and the existing infrastructure.

Total annual government revenues during the years of the country's 8th Five Year Strategic Plan (2011-2015) are estimated to average some OMR7.499 billion, with average annual public expenditure totalling around OMR8.542 billion, leaving an average annual deficit in the General State Budget of OMR1.043 billion. The Plan predicts average oil production of 897,000 barrels per day (bpd) at an estimated average price of US$59 per barrel.

As part of the Plan the Sultanate has launched a number of projects and initiatives in an intensive drive to create a "Knowledge Society". These include projects such as 'Digital Oman' and the E-government strategy to be developed by the Information Technology Authority (ITA). At the start of 2011 the ITA began distributing personal computers to over 113,000 people in response to His Majesty's instructions that a computer should be donated to every family on social security benefits if one or more of its members are school students, and to every individual student in higher education from families in that category. Sultan Qaboos also ordered that the government should bear part of the cost of a personal computer for first year higher education students in the Sultanate, as well as for teachers who are graduates of the Civil Service staff-training project.

Future Employment Initiatives of Oman's 8th Five Year Strategic Plan (2011-2015)

According to the strategy for Oman's economic future, industry is one of the main sectors targeted to replace the country's oil resources as a dependable source of income. The industrial sector is also one of the pivotal elements of the Sultanate's long-term development strategy (2006-2020). The intention is to raise the manufacturing industry's contribution to GDP to 15% by 2020. These industrial initiatives will create over 22,000 jobs, some 40% (8,800 jobs) of which are targeted for Omanis. Similarly, the integrated tourist complexes, which are currently being built and are due to be fully functioning before the end of 2015, are expected to provide around 15,000 jobs, including approximately 7,000 for Omani nationals.

The government is striving to create jobs for Omanis and is encouraging them to become involved in small and medium home-based work and self-employment initiatives. At the beginning of 2011 the Ministry of Commerce and Industry issued a decision allowing nationals to work from home in ten occupations including:

- Date packaging.
- Food preparation.
- Perfume and incense preparation.
- Printing.
- Computer services and photocopying documents.
- Dressmaking and hiring out dresses for parties and weddings.

- Flower arranging (natural and artificial).
- Gift wrapping.
- Tailoring shawls, abayas and hand-woven products.
- Arranging and photographing weddings and festive occasions.
- Henna, hairdressing and beauty treatments.

The fisheries sector also plays an important role in providing employment for Omani nationals. There are over 36,000 traditional fishermen and around 6,000 jobs in related occupations. The sector is expected to absorb more national manpower when a number of planned fisheries projects come on line, particularly those in fish farming.

The Sultanate's economic reform programme is primarily geared to meet the growing demand for jobs created by the sustained growth in the youth population. Economic reform continues to focus on diversifying the economy into labour-intensive areas, expanding and enhancing the role of the private sector, and developing human capital resources by increasing the capacity of young Omanis with the necessary skills through improvements in technical education, vocational training and higher education. The Ministry of Manpower has stipulated a fixed nationalisation ratio in six areas of the private sector. That is, the following percentages of national workers are expected:

- 60% – Transport, storage and communications.
- 40% – Finance, insurance and real estate.
- 35% – Industry.
- 30% – Hotels and restaurants.
- 20% – Wholesale or retail trading.
- 15% – Contracting.

The Oman Future Vision 2020 embraces the strategic changes in the Oman development process to improve and strengthen the national economy, and to diversify sources of national income in a bid to reduce dependence on oil and expatriate labour. This approach relies more on the private sector and the national labour force to achieve better living standards.

In January 2013 the Ministry of Finance announced[2] government plans to provide jobs to 56,000 Omanis in this year, of which 36,000 jobs were to be created in the public sector while the remaining 20,000 will be absorbed by the private sector. The statement indicated that, of the 36,000 government jobs, 20,000 would be created in the military, while 16,000 would be absorbed by the civilian sectors.

Foreign labour in Oman

Since the 1970s, Oman has made steady progress in areas of political and socio-economic development. However, the country has had to rely on expatriates to implement its ambitious socio-economic development programmes due to the limited number of qualified Omanis available, particularly in specialised areas.

Over the past ten years Oman has created thousands of new jobs but the great majority of these have gone to foreign workers, especially in the private sector. The majority of Omani nationals are clustered in the public sector of the economy. As an example, for every Omani working in the private sector, there are five foreign workers (1:5).

2 H E Darwish bin Ismail al Balushi, Minister Responsible for Financial Affairs, State Budget 2013 of the Ministry of Finance

Table 11.1 Omani Population Figures[3]

Year	Omani	Expats	Total
2010	1,957,000	816,000	2,773,000
2011	2,013,000	1,282,000	3,295,000
February 2013	2,146,924	1,684,629	3,831,553

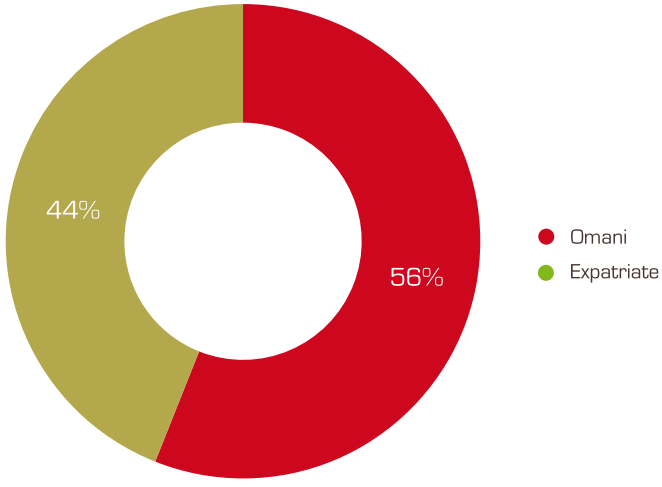
Expatriates work in different economic sectors: unskilled and semi-skilled expatriates are concentrated in the construction sector, which represents 32.5% of the total expatriates in the private sector. Expatriates constitute 44% of the total population (3.8 million), with a growth rate of over 5% per annum.

The total size of the expatriate labour force in the private sector is 1,486,362, classified in the total expatriate labour force as follows: 10.4% professional, 6.8% technical, 21.7% vocational, 19.1% skilled and 41.8% semi-skilled. The majority of unskilled workers are concentrated in the domestic services (drivers, domestic workers and childcare). The percentage of workers from Asia, Bangladesh, India and Pakistan reached 95.5% of the total number of expatriates in the private sector.

As a labour-receiving country, Oman has adopted a Labour Law that does not discriminate between nationals and non-nationals. Ministerial Decree No. 59/1993 governs recruitment of foreign labour through certified recruitment agencies.

Within the above context, the Ministry of Manpower continues to review, amend and implement the necessary legislation and laws to respond to developments in the labour market. The Labour Law issued by Sultanate Decree No. 35/2003 stipulates that expatriate workers should be proficient and have technical skills that the country needs. Expatriate workers should further meet conditions of legal entry, obtaining the necessary residential permits required for foreigners.

Graph 11.1 Foreign Labour Force as a Percentage of Total Labour Force in GCC Countries[4]



3 Oman National Centre of Statistics and Information.

4 Sourced from Arab Labour Organisation (2010) *National Statistics on Employment, Youth Migration and Human Development in Arab Countries*, Table 14, pg 24.

Unemployment

Oman has a high rate of unemployment, estimated around 14 to 15% (a comparison of figures from between 2007 and 2012 gained from the Ministry of Manpower, Public Authority for Social Insurance, Ministry for Oil and Gas, Central Bank of Oman, Capital Market Authority and the Telecommunications Regulatory Authority) and reaching up to 33% for youth aged 15-24 years. This would indicate that securing employment is a major challenge for young Omani nationals. This is concerning because a society with high unemployment is economically inefficient. Each earning member of the labour force contributes to Gross Domestic Product (GDP) so theoretically the lower the level of unemployment, the stronger the economic base.

The Table of Unemployed by qualification (from the Public Authority[5] of manpower register, 2013) provides employment by level of educational attainment. This shows that as a percentage of the unemployed in Oman, 64% or over 103,000 are those with secondary level qualifications.

Table 11.2 Unemployed by qualification (2013)

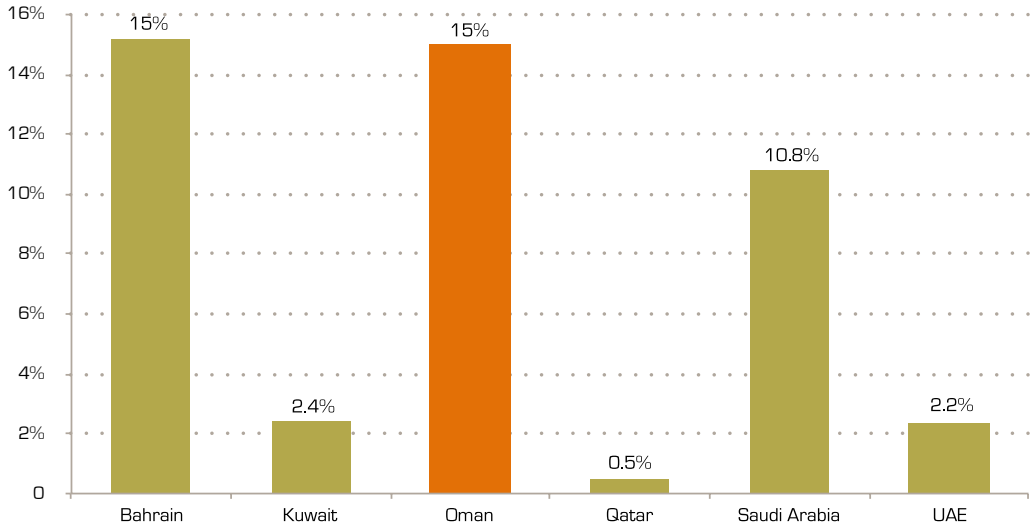
Qualification	Male	Female	Total	%
Illiterate	1224	2621	3845	2.36%
Reads and writes	2323	3984	6307	3.87%
Primary Education	5256	6286	11542	7.08%
Preparatory	18379	9629	28008	17.19%
General Education Diploma	27396	69718	97114	59.59%
Diploma-secondary	880	5308	6188	3.80%
Professional Diploma	692	197	889	0.55%
Academic	1811	6985	8796	5.40%
Postgraduate Diploma	4	35	39	0.02%
Master	50	49	99	0.06%
Doctorate	7	11	18	0.01%
Higher Qualification than Doctorate	91	36	127	0.08%
Total	**58113**	**104859**	**162972**	**100%**

Source: The Oman Public Authority of Manpower Register, 2013

The Graph 11.2 shows the rate across the GCC as measured by the International Labour Organisation in 2008 and clearly indicates that in relation to most of its neighbours (with the exception of Bahrain), Oman's unemployment rate was extremely high.

5 The Public Authority of Manpower Register is the organisation responsible for private sector workers.

Graph 11.2 Unemployment rates in the GCC (2008)



The labour market underwent significant changes in the early part of 2011 with the government's push to create 50,000 new jobs. It is important to put the number of new jobs in perspective relative to the number of Omanis already holding jobs. As at the end of 2012, 355,774 Omanis were employed in the private sector (Public Authority for Social Insurance) and at the end of 2007 (the most recent data available), 770,000 nationals were employed as civil servants. A total Omani work force of 1,125,774 combining 2007 data with 2012. The 50,000 new jobs, therefore, represents a 4% increase in the total number of Omanis employed.

From the beginning of 2011, the move to create new jobs has been rapid. In early March of that year, the government announced some 10,000 more Omanis would be employed by the Royal Oman Police (ROP), adding at that time that the ROP had already completed procedures for recruiting a further 3,000 citizens. In mid-April 2011 Oman Civil Service Ministry had recruited approximately 6,500 people during the previous four-week period. Businesses also started to take on additional employees. The Ministry of Manpower reported some 55,000 positions had been created between March and July 2011, with the private sector accounting for 32,000 of these jobs.

While the Ministry of Manpower continues its efforts to find jobs for the unemployed, it has also introduced some alternative options for job seekers, including training and an opportunity to enrol in the Sanad programme, which provides loans of up to OMR50,000 (US$129,880) for Omanis who would like to start their own business. The Ministry of Manpower also continues to update the tools it uses to find work for the unemployed. In September 2013 it announced it was establishing an electronic system to match opportunities with the qualifications and experience of job seekers.

At the same time that businesses were starting to take on more employees they were also increasing salaries in response to a new minimum wage (the government increased the minimum wage of Omanis in the private sector from OMR140 (US$365) to OMR200 (US$520) per month). By July 2011 it was clear that companies had started to comply with the new law. A report from the Public Authority for Social Insurance[6], indicated that as of July 2011 there were no employees earning below OMR180-OMR200 per month. By comparison, at the end of 2010, there were 116,506 Omanis being paid less than OMR180 per month. In July 2013, the Omani government decided to give a further minimum wage increase for Omanis working in the private sector from OMR200 to OMR325 per month.

6 The Public Authority for Social Insurance is the organisation responsible for providing pension plans to private sector workers.

Omanisation

As can be seen from the discussion above, Oman is creating job opportunities for its nationals in various economic sectors. The Sultanate is striving to develop its national human capital and best utilise its own human resources by seeking to secure job opportunities, increase economic growth and maintain equilibrium between supply and demand in the labour market. Human resources development is high on the Government's agenda, where employment of nationals is an explicit key strategic objective.

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Broadening of the labour market, increasing national labour force participation, and expanding and enhancing the role of the private sector to create more jobs for Omanis, continue to be at the top of the Government's priorities. The Government is also working to improve the education system by updating and increasing the number of vocational training centres.

To reduce unemployment and limit dependence on foreign labour, since 1988 the Government has pursued the 'Omanisation policy' aiming at gradually increasing the participation of qualified Omanis in the labour market. Special emphasis has been placed on increasing female participation in both the public and private sectors to replace expatriate labour. Despite these efforts, the Omani labour force remains unbalanced, primarily in the public sector, where supply outstrips demand. Omanis are attracted to work in the civil service because they have a perception that it provides better incentives such as higher earnings, better working conditions and pension benefits after the end of service, which provides them with financial security.

However, the public sector has not been able to absorb the Omani labour supply. In response to this dilemma the Ministry of Civil Service has put in place special arrangements and requirements to restrict the employment of nationals in the public sector, except for replacement purposes, because of the increased availability of job opportunities, better wages and social insurance coverage in the private sector. Despite this, private-sector enterprises continue to depend on expatriates in many fields.

Role of women in economic development

The participation of Omani women in different economic sectors is an important and influential contribution to Omani society. The challenges of globalisation and the free economy compelled Omani women to participate more actively in a knowledge-based market economy, and many run their own businesses from their homes. The Government has encouraged this trend and continues to stimulate women's participation in the economic development process by providing various kinds of support and encouragement, such as training, counselling, capital and marketing support.

Females constitute 49.4% of the population in Oman (2012). Compared with other countries in the Gulf region, Oman is witnessing significant progress in the area of female education. Omani women have taken leading positions in both the public and private sector.

Omani women have taken leading positions in both the public and private sector.

Despite this, the rate of participation in the labour force by Omani women remains low. The percentage of females working in the public sector is 31%, concentrated in lower status job categories such as clerical and administrative jobs. In the private sector, female participation is as low as 17.9%, concentrated in feminised professions such as nursing and teaching. Women, in general, are still not in decision-making positions.

The Ministry of National Economy reports that only 2% of women are self-employed, and make up less than 1% of Omani employers. The modest participation of women in the formal economic and social sectors is primarily attributed to the Omani socio-cultural norms, which constrain women's participation and mobility.

However, women's participation in informal sector jobs such as handicrafts and traditional industries is becoming increasingly significant. Information on the exact extent of the economic participation of women is still uneven, partly because of the way participation is defined and partly because of under-counting of workers in the informal sector. It is, therefore, likely that the economic participation of women is much higher than official statistics show.

Labour Laws include special provisions for women, such as maternity leave, restrictions on night working hours and dangerous workplaces. Free-trade business opportunities are open to Omani women and the long-term development strategy Oman Future Vision 2020 provides encouragement for those women interested in establishing private businesses and investments.

Entrepreneurship in Oman

Elevating entrepreneurship and improving domestic innovation in business are the keys to promoting a country's productivity, competitiveness, and economic growth.

Entrepreneurial activities foster economic growth through innovation, reform, and knowledge transfer. In recent years, the Omani Government has made vigorous efforts to improve the domestic environment for entrepreneurship. Government efforts have been focused on economic re-organisation of policies that promote enterprise start-ups; reforming labour and capital markets; reducing governmental controls and administrative barriers; adopting competitive policies for new enterprises, special plans, and services for helping start-ups; and expanding the teaching of entrepreneurship in the education system. Audretsch and Thurik (2001) documented research that showed that improved economic growth rates along with reduced unemployment rates were accompanied by greater entrepreneurial activity within a country, and also vice versa.

In recent years, the Omani Government has made vigorous efforts to improve the domestic environment for entrepreneurship.

The goal of entrepreneurial education is to cultivate future entrepreneurs and to develop students' entrepreneurial spirit such that they will be motivated to develop a business, enterprise, or other form of commerce. Entrepreneurship is a process, which involves the efforts of an individual in identifying a viable opportunity in a market place and obtaining and managing the resources needed to exploit it. Successful action by the entrepreneurial individual to obtain and maintain a fit between these constituents will move the enterprise along a transformational life cycle.

The Current Environment for Entrepreneurship in Oman

As stated earlier in this chapter, Oman has a high rate of unemployment. The development of entrepreneurs is a key Government strategy for shifting many young Omani from the expectation of a secure and well paid job in the public service with low expectations of performance to self sustaining work in the private sector with initial low rates of return and long hours to ensure sustainability and survivability.

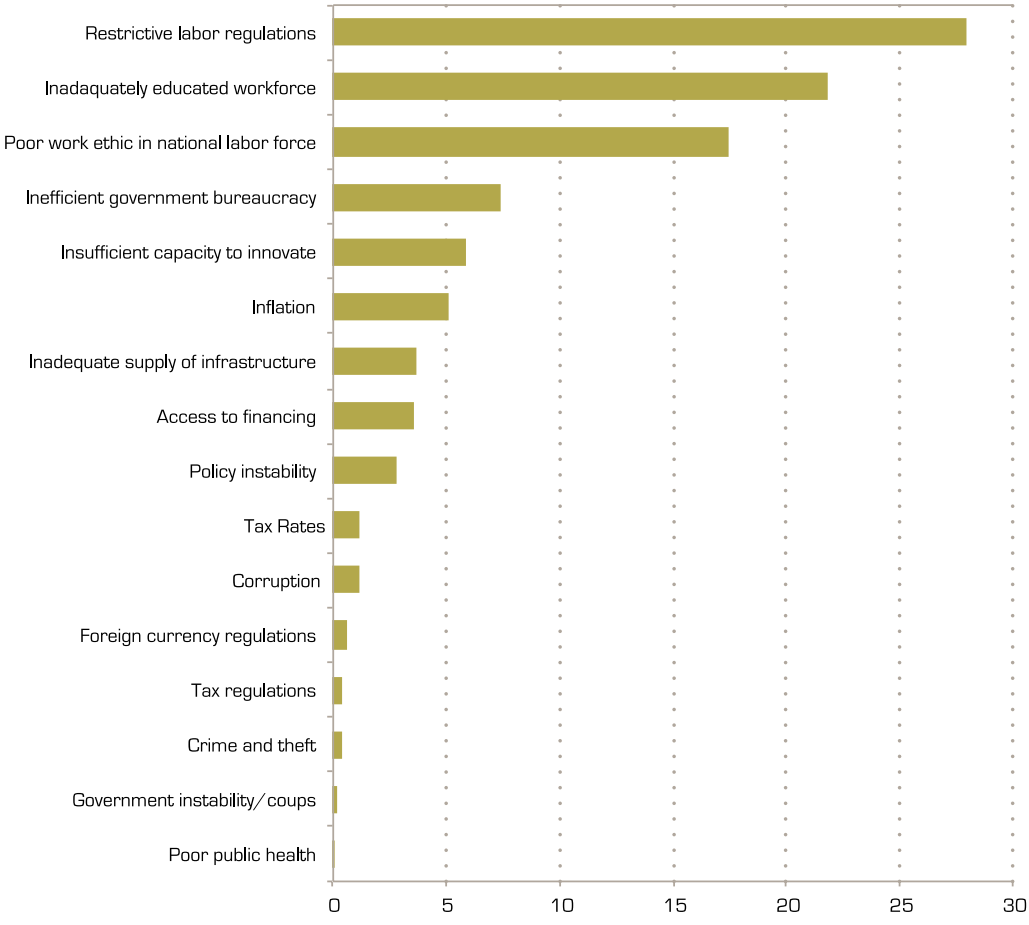
One of the Oman Government's major thrusts in the development of entrepreneurial endeavour is to encourage and incubate small and medium enterprises (SMEs). The Government initiative involved

encouraging banks to support loans for SME development and the Ministry of Commerce and Industry (MoCI), through its Directorate for the Development of Small and Medium Enterprises, is charged with supporting SME development to give support to new entrepreneurial ventures.

Published data from the HSBC bank[7] shows that there are only 15-20,000 SMEs in Oman generating 10-20% of employment. In Oman, SMEs finance comprises only 2-5% of the portfolios of local banks. Estimates from the World Bank indicate that SMEs have contributed over 55% of GDP in OECD countries and between 60-70% of GDP in middle-income and low-income countries generating 60-70% of employment. This would imply that there is a significant potential for the SME segment in Oman to grow in terms of contribution to GDP and creation of employment.

However, the economic environment of Oman is not conducive to the development of SMEs. The World Economic Forum's 2013 to 2014 *Global Competitiveness Report Index* (Schwab 2013) records that Oman's business environment is difficult, in spite of ongoing efforts to facilitate easier and more flexible conditions by a range of government initiatives.

Graph 11.3 Most Problematic Factors for Doing Business in Oman (Schwab 2013, p.304)



Against 148 other countries in the world, this report ranks Oman 33 in over all competitiveness. Within the GCC, Qatar is 13th, UAE is 19th, Saudi Arabia 20th, Kuwait is 36th and Bahrain 43rd. (Schwab 2016, p.16).

7 Qamar Saleem, Senior Manager-BBU, HSBC Bank Middle East Limited.

The Development of Entrepreneurs and SME's

The development of SMEs is closely linked to entrepreneurship. In developed countries SMEs typically make up around 20% of the companies in the economy, but may employ as much as 80% of the local workforce. Information on the actual numbers of SMEs in Oman is difficult to obtain and different sources provide conflicting information. For example, a recent survey (2012) carried out by Ministry of Commerce and Industry states there are currently around 91,000 SMEs functioning in Oman. A further survey conducted by the Directorate General for Development of SMEs states that SMEs represents more than 90% of the total number of companies in Oman and contribute around 20% of the GDP. This information is at odds with the HSBC Bank report, which states there are 15-20,000 SMEs.

While the state provides resources and services to support the establishment of small businesses, the private sector is expected to play a larger role in financing. State support is increasing and a number of initiatives exist to provide growth to SME and entrepreneurial development. Several Omani banks have separate departments for SME funding. The government has introduced twelve programmes, including a venture capital and a loan guarantee scheme, to help entrepreneurs starting small and medium enterprises in Oman.

The government has introduced twelve programmes…to help entrepreneurs starting small and medium enterprises in Oman.

The Ministries of Commerce, and Finance and the Oman Development Bank (ODB) have jointly formed a corpus fund, for guaranteeing repayment of 50% of the bank loan taken by small and medium enterprises. The bank loan guarantee scheme for SMEs was introduced by the Ministry of Commerce and Industry, in cooperation with two Omani banks, in October 2011. The pilot project is for one year and guarantees 50 loans. This trial programme will test the drawbacks and strengths of such a scheme. To become eligible for getting a credit guarantee facility, the capital investment in a project should not exceed OMR500,000 and the loan amount should not exceed OMR250,000. Therefore, the loan guarantee is for a maximum of OMR125,000.

Apart from providing access to finance, the Directorate General for Development of SMEs assists with feasibility studies and assistance with selecting the right technology, which are also crucial for the success of SMEs. For small and medium enterprises seeking loan guarantees, the process of due diligence and feasibility studies is considered necessary to ensure the viability of the business proposition before the venture is underwritten. Once agreed, the banks cannot deny a loan facility due to the guarantee provided. Despite this apparent willingness of the Banks to support SME creation, Omanis say the processes required are too complicated to complete and the returns take too long.

The Directorate General for Development of SMEs states as many as 5,000 new SME units are registered with the Ministry of Commerce and Industry every year. Between 2008 and 2009, the annual growth in number of SME units was 4,700. Currently it is stated as around 5,000 units per year. This would suggest a vibrant SME culture of entrepreneurship, as growth is strong and it would also indicate that Oman's entrepreneurial activity was healthy. However, feedback from Omani nationals is that they operate their business interests outside of, or in many cases alongside, their fulltime employment.

The majority of entrepreneurial businesses are concentrated in the service industry and are small in size because the people involved have either accumulated prior skills, knowledge and experience; have knowledge from education or a corporate job; or the nature of the venture started off as a hobby or personal interest. Most entrepreneurs in this context enjoy what they do and have initiated ventures for personal reasons, including to gain autonomy; economic or financial necessity; or being inspired by a role model. Many Omanis (particularly women) have been inspired by a family role model and have benefited from family support in managing their businesses and in coping with the demands of running the business. This can range from encouragement to assistance in finance and/or business advice. Family, especially those who are already involved in entrepreneurial activity, have also helped in providing business and financial advice by providing human resources and playing a public role.

The Evaluation Project Team's consultation with stakeholders both within Government as well as with industry also indicates that SME development and entrepreneurship appears to be the domain of predominantly Asian expatriate interests, with minimal involvement of Omani's. Government officials consider that many Omani are owners of, or have a holding or a controlling interest in, an SME enterprise but have little involvement in the business or management of it on a day-to-day basis. Although many business-owners in Oman may fully or partly own small to big enterprises, the running and managing of such enterprises is often left fully to Asian expatriates for a monthly financial return. In this context, such business-owners are not seen as entrepreneurs if others take the risk and innovate, while Omani nationals only input financing to ensure compliance with Omani business law and reap the rewards for minimal effort.

While the current system may be surviving in the short term, the Evaluation Project Team was informed that at least for some investors, issues of real entrepreneurial ownership and business development will need to be confronted in the future.

Some of the issues involved in developing an entrepreneurial economic environment include:

- Restrictive labour regulations, bureaucracy, poor work ethic from Omani's and inadequately trained and educated Omani entrepreneurs giving little confidence in business success.
- Lack of venture capital funds. For entrepreneurs, the challenges in Oman include securing finance without collateral in an environment with prohibitive interest rates and a distrust of credit (the market has no privately held credit bureau) for start-up initiatives.
- A lack of business skills, investment know how, and a hostile entrepreneurship ecosystem.
- No industry standards of delivery (safety in particular including food, hospitality, outdoor activity, environmental).
- Balancing bureaucracy against capability to promote development (many of the people wanting to be entrepreneurs do not have the level of skills required to get through the bureaucracy of securing support).
- Limited networks to support entrepreneurs. Such connections would assist them with expertise from the fields of business to exchange information, discuss issues and seek advice on common topics, all of which is vital for business success.
- Unrealistic expectations of rates of return (In Oman, enterprises stay in the start-up phase for an average of 2-3 years).

Due to the collective nature of Omani society, the majority of entrepreneurial start-ups seek advice from their families, colleagues and business associates. Omanis suggest that personal relationships and knowing the right people in the right places can help them overcome some of the barriers in the business and facilitating the processes involved, obtaining fairer deals and gaining business opportunities. They also relate that this is often more important than ability or capacity to be successful in an entrepreneurial venture.

11.3 How The Education And Training System Works

Post-Basic Education

In Oman school education consists of twelve years of formal study. Post-basic education comprises grades 11 and 12. The curriculum focuses on providing students with core compulsory courses along with optional courses from which to choose according to their interests and abilities. During this phase of their education, students are prepared for either a future academic career, which may take them into vocational, technical or university education, or to work depending on their learning achievements and career objectives.[8]

8 The Post Basic structure and curriculum was introduced in the 2007/2008 academic year by the Ministerial Decree No. 160/2007 (Ministry of Education 2007c).

The current Post Basic curriculum requires students to undertake 10 subjects in Grades 11 and 12. This is made up of seven compulsory subjects and three electives, as set out in the table below:

Compulsory subjects	
1	Islamic Studies
2	Arabic Language
3	English (A or B)
4	Mathematics (applied or pure)
5	Sciences: (At least one of chemistry, physics, biology, science and technology and science and environment)
6	Social Studies
7	Career Path
Elective subjects	
1	English Language Skills
2	Biology
3	Physics
4	Chemistry
5	Computer business/communication
6	Economic geography
7	Geography & modern technology
8	History (Islamic civilization)
9	History (The World Around Me)
10	Physical Education
11	Information Technology
12	Fine Arts
13	Musical Skills

The curriculum changes introduced in the 2007/08 academic year at Grade 10 level corresponded to international best practice at the time. These practices were based on ideologies of making students the centre of education; encouraging them to investigate; find answers to questions themselves; undertake experiential learning; work in cooperative groups; and inviting students to express their views and engage in participatory learning.

The Oman curriculum aims to develop core skills, work skills and also includes career-planning skills. The curriculum focuses on developing positive attitudes towards work, society and the environment. Post-basic education encourages more independence in learning and provides students with life skills. Currently, there is no streaming of students into science and arts, but students are provided with an understanding and given expectations of the different specialisations available in higher education and the subjects needed for each specialisation.

The school system of curriculum and student support in Oman has been designed and developed with the aim that students are prepared to be good citizens who can use the skills they acquired in school whether they become higher education students, employees, or owners of their own business (entrepreneurs).

Aims of the basic education include:

> **Aim 5:** Provide a learner-centred education which furnishes the learner with appropriate life skills through the development of self- learning, scientific and critical thinking and the ability to understand and apply contemporary scientific and technological innovations.
>
> **Aim 6:** Ensure that students are adequately prepared for the requirements of further and higher education, the labour market and modern life generally (Ministry of Education 2009c).

In addition, the Post-Basic Education Programme (2008b): Grades 11 and 12, aims for students to develop the following characteristics:

> **Characteristic 2:** Student-centred, activity based learning activities that allow students to develop understanding and problem- solving abilities which can be applied in a variety of real-life situations.
>
> **Characteristic 4:** Core programmes that emphasise the development of employability skills and universal competencies.
>
> **Characteristic 5:** Flexibility that permits the Ministry, educational regions or even schools to adapt to engaging needs of the community in terms of Grade 12 graduate skills.

These principles of the Omani Philosophy of Education show commitment to the development of entrepreneurship skills required for higher studies, employment and career planning. The Ministry of Education is clearly signalling that the following key aspects of secondary education development are significant for Oman:

- Secondary education's critical role in addressing human development concerns and building the 'knowledge society' that will enable the country to connect effectively with globalisation processes.
- 21st Century labour markets demand that workers show greater levels of flexibility to carry out multiple tasks and higher skills levels.
- Secondary schools are dealing with young people at what is increasingly recognised as a critical stage of their lives – adolescence.
- These young people are seen as a crucially important segment of society, the future human and social capital of the nation.
- Secondary education has an essential role in ensuring future social cohesion.

A secondary education system that is responsive to social needs and relevant to the country's growing formal economy is clearly recognised as essential to Oman's national development.

Career guidance for students: The National Career Guidance Centre (NCGC).

The NCGC provides an imbedded network of career advisors in schools. Their role is to help students identify their capabilities and capacity, providing advice on relevant career options, and to give support to assist students to decide which courses to take in Grades 11 and 12. The NCGC is the frontline and first responder to ensuring that school leavers are prepared for the future.

The NCGC was established by Royal Decree in 2008. It provides career guidance and counselling services to Omani students through a network of nearly 1,200 full-time Career Guidance Specialists based in schools across 11 government regions. In practice, the focus of the service is directed at 15-18 year olds, although there are plans to increase its level of services to 11-15 year olds.

The NCGC Mission is supported by three goals:

1. To assist students to participate in their own development towards becoming self-directed and the person that they desire to be.
2. To achieve excellence in the preparation of students and others to excel in the workplace of today and tomorrow.
3. To deliver an effective and responsive careers service through the provision of quality career guidance and counselling.

The stated objectives of the NCGC are to:

- Guide students, job seekers, and other individuals towards jobs, occupations, and educational/ training programmes that match their aptitudes, interests, abilities, and personalities
- Train teachers to become Career Guidance Specialists capable of providing the needed career guidance services to students, job seekers, and others.
- Promote awareness regarding the national employment market by establishing a national job demand database and providing up-to-date information on current and future job opportunities in the workforce.
- Advise the Omani educational and training sector regarding planning and delivering training programmes and specialisations that meet current and future needs of the employment market.
- Assist and guide women and the handicapped to develop their careers and find satisfying and gainful employment, including self-employment opportunities.
- Develop among individuals positive attitudes towards seeking employment in available and future jobs.

The NCGC is split into four departments: guidance and career counselling; study and technical support (which includes links to the labour market); communication and marketing; administrative and financial affairs. An important role of the centre is to provide training to career guidance specialists in each school to enable them to help students in the transition from school to higher education or to the job market. Supervisors provide professional support to careers guidance staff on a regular basis and the NCGC carries out an audit at each school twice a year.

Covering each the Ministry's eleven educational Governorates, there are approximately 55 career guidance supervisors and almost 1,200 Career Guidance Specialists in schools throughout Oman. School career guidance activities are provided to assist students in identifying their talents and abilities with a view to their future career. Some elements include decision- making, steps to success, self-confidence, a positive view on life, higher education study, starting up small projects, skills for successful presentations, organising and completing a student portfolio.

The regional distribution of NCGC specialists across the eleven Governorates is shown in Table 11.3 below:

Table 11.3 Regional distribution of NCGC specialists (Academic year 2012/13)

	Governorate	Male	Female	Total
1	Muscat	86	78	164
2	Batinah North	109	105	214
3	Batinah South	72	68	140
4	Dakhliyah	82	75	157
5	Sharqiah South	50	48	98
6	Sharqiah North	48	44	92
7	Buraimi	14	12	26
8	Dhahira	47	44	91
9	Dhofar	86	74	160
10	Al -Wusta	21	7	28
11	Musandam	8	6	14
Total		**623**	**561**	**1184**

NCGC administers a psychological self assessment tool (Career Preferences and Personal Traits Activity) that assists students to map their future life goals, plan these goals through education and learning, and directly promote and help the students decide their academic future or working future and support them in achieving their goals. Other activities seek to raise awareness of students' interests and stimulate discussion with the career guidance specialists over possible career pathways. Student career pathway workbooks are used at age 15-18 to help with subject selection and thinking about transition post-school. Parents are actively encouraged to support their children, although the NCGC intends to develop resources to provide more targeted support in this area.

A key outcome of this work is that every student must prepare a careers portfolio before graduating from Grade 12. This contains a student's personal details, the psychological self-assessment, discussion of their work and career opportunity exploration as well as the rewards and achievements they are seeking as adults.

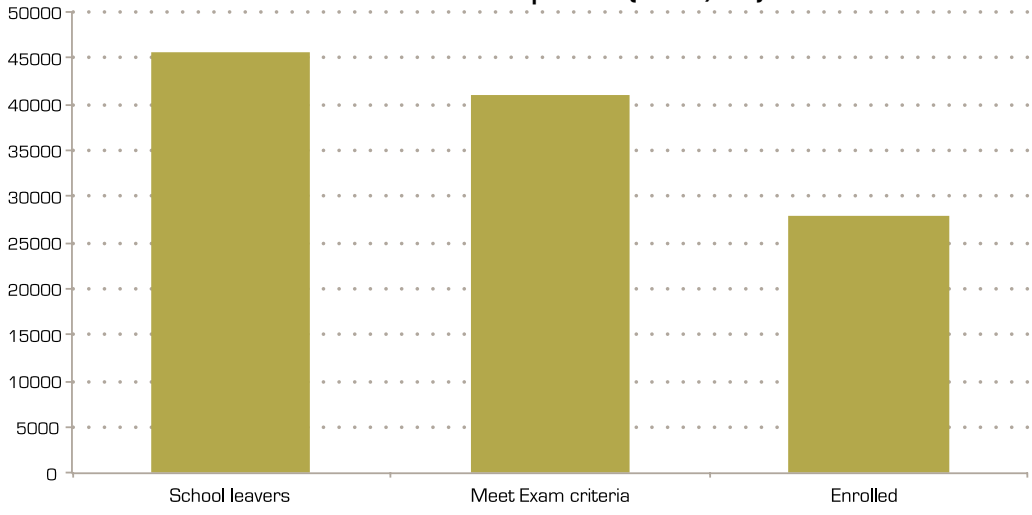
Higher Education Enrolments

All public institutions of higher education are funded by the government and available free of charge to Omani nationals. Admission to these post-secondary public institutions is based on academic merit.

After completion of G12, a student can apply to a higher education institute by requesting a position in the institute through the Higher Education Admission Centre (HEAC). All higher education places, both public and private, are managed under one unified online system run by the HEAC. Each higher education institute publishes the minimum entry requirement for each of its degrees and the student selects his or her choices in order of preference. When the Ministry of Education publishes secondary school results in mid July, these results are fed automatically into the system and offers are made in early August.

Students who are not successful in securing a place in academic programmes within higher education institutes can compete for entry to programmes funded by the government with private training providers. The HEAC is responsible for ensuring that all students are treated equitably and are given the best available opportunities, based on their study preferences and the level of their achievement in secondary school.

Graph 11.4 **Comparison of the Number of students completing Grade 12, compared with those seeking Higher Education placements and those who confirmed acceptance. (2012/13).**



In the Chart above the descriptors are as follows:

- **School Leavers:** students who completed their G12 year.
- **Meet Exam Criteria:** students who passed the general education diploma or equivalent.
- **Enrolled:** students who have accepted offers of study at higher education institutions.

These figures show that over 17,700 students who successfully graduated from Post Basic G12 did not enter study at a higher education institution. It is assumed that most of these students were absorbed into the labour market.

The majority of students entering into higher and post-secondary education in Oman first undertake some form of foundation programme designed to help prepare them for their further studies. General Foundation Programs are available in all public and private higher education institutions and are designed to help students attain the prescribed student entry requirements in at least four areas: English, mathematics, computing and general study skills.

Table 11.4 Statistics for new school graduate entering Sultan Qaboos University. (2010 to 2013).

Entrance Year	Number of new school graduates accepted	Number of new school graduates requiring foundation programme	% requiring foundation programme	% students not completing (includes withdawals)
2010	2,763	2,728	98.7%	4%
2011	3,124	3,081	98.6%	4.3%
2012	3,306	3,267	98.8%	Not available
2013	3,072	3,028	98.6%	Not available

Higher Education System

Currently overall enrolment into higher education encompasses about 19% of the 18 to 24 year old age cohort. Oman, as with all member countries of the GCC, is a population that presents inversely to Western nations. Whereas western countries have a burgeoning aging population, Oman's 18 to 24 year old age cohort represents 60% to 70% of the population. Oman has set the ambitious goal of wanting 50% of people under the age of 25 participating in higher education by the year 2020.

Higher education institutions in Oman include Universities, Colleges of Applied Sciences, Higher Colleges of Technology, Colleges of Technology, Private Colleges and Universities, and Private Training Providers. It consists of a number of public institutes managed by government organisations, and private organisation providers supervised by the Ministry of Higher Education.

Table 11.5 List of Oman Higher Education Institutions and their jurisdiction agency (2013).

Jurisdiction Agency (Number of Higher Education Institutions the agency is responsible for)	Types of Higher Education Institutions (Number of institution of this type)
Independent (1)	Sultan Qaboos University (Government)
Ministry of Higher Education (30)	Colleges of Applied Sciences (Government) (6)
	Private Universities (5)
	Private Colleges, two of which are designated as University Colleges (19)
Ministry of Manpower (7)	Higher College of Technology (Government)
	Colleges of Technology (Government) (7)
	Oman Tourism College (Private)
Ministry of Health (16)	Nursing Institutes (Government) (11)
	Health Science Institutes (Government) (5)
Ministry of Defence (5)	Academies/Training Centres and the Command and Staff College (Government with restricted admission) (4)
Ministry of Awqaf and Religious Affairs (1)	The Institute of Shari'a Sciences (Government)
The Royal Oman Police Academy (Government, with restricted admission), Royal Oman Police (1)	
Central Bank of Oman (1)	The College of Banking & Financial Studies (Quasi-Government)

The first public university in Oman, Sultan Qaboos University (SQU) was founded in 1986. This is Oman's premier government university and has a current student population of approximately 17,000 students in eight specialised colleges. SQU is self-administered and has nine colleges.[9] Starting from September 2008, SQU began introducing PhD studies in its colleges of Agriculture and Marine Sciences, Medicine and Health Sciences, Engineering, and Science. A bachelor's degree takes about five years to complete,

9 These include the Colleges of: Agriculture and Marine Sciences, Arts and Social Sciences, Commerce and Economics, Education, Engineering, Law, Medicine and Health Sciences, Nursing, and Sciences.

as the first year is spent studying English, and the second year studying relevant science subjects. The last three years are dedicated to core degree units. Similarly, a medicine degree takes seven years to complete.

As the number of students finishing secondary school increases each year, SQU and other public colleges have struggled to cope with the demand. To reduce the trend of Omani's leaving to find higher education and training opportunities in other countries, particularly Middle East and North African countries, the government has encouraged the private sector to enter into higher education provision. The first private college was established in 1994 and there are now seven private universities: Sohar University; the University of Dhofar; the University of Nizwa; the German University of Technology in Oman; the Arab Open University; the University of Buraimi, and a university in the Sharqiah (Eastern) Region.

The public university is normally utilised by Omanis only as it is free education for Omanis, while as a general rule expatriates attend private universities or study abroad. Most private institutions focus on popular studies such as business administration and computer sciences. They are usually affiliated with European, Australian or American institutions and the language of instruction is mainly English.

In addition to the public and private universities available, there are currently six Ministry of Higher Education Colleges of Applied Sciences (CAS) enrolling approximately 7,000 students annually. The Colleges of Arts and Social Sciences, Commerce and Economics, Education, Law, and Nursing offer Bachelor's and some Master's degrees. The Ministry of Higher Education also administers six Colleges of Technology under the jurisdiction of the Ministry of Manpower with an annual enrolment of 6,000 and sixteen Institutes of Health Science with 707 enrolled students. These were formerly colleges of education, but in 2005 Royal Decree No. 62/2007 was issued to transform them to better cater to the current labour market in fields such as international business administration, communication, design, engineering, and IT. They are located in Ibri, Nizwa, Salalah, Sohar, Sur, and Rustaq.

The College of Applied Sciences in Rustaq is the only one that still offers an education degree. The Oman Academic Accreditation Authority accredits private colleges and universities (under the supervision of the Education Council). Oman's Ministry of Manpower operates the Higher College of Technology in Muscat and six colleges of technology in Al-Mussana, Ibra, Ibri, Nizwa, Salalah, and Shinas. In addition, The Ministry of Health runs a number of health institutes to prepare assisting medical staff like nurses, paramedics and pharmacists.

Private Higher Education institutions now constitute a little over one quarter (27%) of the country's total enrolment in Higher Education. As of March 2009, there were 33,521 students enrolled in Oman's twenty-four private HEIs. Ninety-six per cent (24,941) of the students were Omani; 1% (283) came from the GCC; and 3% (764) were of other nationalities. Fifty seven per cent of students were female; and 43% male. With 45,337 students enrolled in government HEIs, the government is still the largest education provider.

In the Sultanate of Oman, the students' attrition rate at SQU during the period 1994-2001 was 12.3% (Al Ghanboosi et al., 2009). International statistics indicate that high student attrition rates are a widespread phenomenon affecting the higher education sector in both developed and developing countries and Oman is not outside the norm with comparative international figures. For example, the number of students who withdrew from Kuwait University was 36% in the year 1992/1993, dropping to 16% by the year 2003/2004 and the attrition rates at Victoria University in Australia have been around 25% for the period 1994-2003 (Gabb, Milne, and Cao, 2006). Similarly, statistics from UK universities show that dropout rates during the academic year 2003/2004 are between 8.6% (University of Leeds and the University of Manchester) and 22% (University of Edinburgh and University of Ulster) (Johnston, 2005).

Technical and Vocational Education (TVET)

TVET training plays an important role in preparing and qualifying school leavers who complete Grade 10 or above, to meet the country's requirements for a work ready national labour force in various vocational areas.

The current mandate for vocational training rests with the Vocational Training Directorate in the Ministry of Manpower. This Directorate has developed vocational training centres aimed at meeting the requirements of the Omani labour market for a semi skilled and skilled national workforce. School leavers who decide on a technical and vocational training pathway after leaving school will enrol in this system.

Three levels of vocational qualifications are offered in vocational training centres. Students who complete Grade 9 at school can join the first-year programme in the vocational training centre. Those who complete Grades 11 or 12 can join the second-year programme. To make the system more flexible and to enhance students' opportunities in finding jobs, students in vocational training centres can leave the centre after completing any level.

The government has paid special attention to vocational training centres, which were expanded and developed to cater to more students and to continue providing the labour market with a qualified and well-trained national labour force. To ensure that adequate curricula are developed and that appropriate entrepreneurial skills are included, both the public and private sector participated in the development of the curricula of the vocational training centres. This was possible through the involvement of the Sectorial Committees of Omanisation, which consists of key representatives from the private and public sectors. After the curricula were developed, they were presented in a conference and a series of workshops with participants from different sectors in the country and representatives from bodies such as Advisory Council (Majlis Al- Shura), State Council (Majlis Al-Dawlah), and regional/international organisations such as the International Labour Organisation and German Technical Cooperation. The feedback received was taken into consideration before finalising the curricula.

Following recommendations of the International Labour Organisation to allow vocational training graduates to continue their studies by making the system more open, notable graduates from vocational training centres are allowed to attend a one-year bridging programme equivalent to the foundation year in the colleges of technology, after which they can join the colleges of technology to continue their studies. Bridging vocational training and technical education is a new approach that was first implemented in September 2008. It resulted in several changes to the curricula of vocational training centres with more entrepreneurship skills being added. Blending training and work leads to the Omani private sector playing a major role in ensuring that graduates are qualified technically and vocationally.[10]

In the survey of schools carried out by the Evaluation Project Team there was a low level of TVET curriculum being taught, and few TVET facilities in schools. As noted above, the survey of the labour market environment indicated that the education system gives little preparation for further studies in technical or vocational education. This view was supported by the findings of the schools survey.

The Evaluation Project Team found minimal alignment between the curricula of the vocational centres and that of secondary schooling. Within the secondary school curriculum there was little provision for technical learning in areas such as trade or domestic skills. In further dialogue with schools and stakeholders this understanding was further reinforced. Schools tend to emphasise providing school leavers with preparation for higher education to the detriment of preparation for the work force.

10 Ministry of Manpower: http://www.manpower.gov.om/en/vocatraining/v_introduction.asp

11.4 System Awareness of Issues and Challenges

Managing the constraints and obstacles facing the successful integration of Post Basic graduates and school leavers into Higher Education and the labour market has proved an elusive goal for the Ministry of Education initiatives to date. School leaver statistics and stakeholder feedback still indicate that leaving students are not yet meeting the competencies required by industry and the entry requirements of higher education.

The World Bank Report (2012) and the Human Capital Report (2008) indicated that the executive directors of major companies in Oman do not expect to receive graduates who are sufficiently prepared for their businesses. A similar view of the quality of graduates' education was also expressed at the Incorporation of Entrepreneurship in Education workshop held by the National Centre for Career Guidance in December 2012.

Lack of accurate labour market information means that gauging the suitability of the Ministry of Education programmes and curriculum with labour market requirements and students subject choices is difficult for all parties to assess. Work roles, job choices and the current and future requirements of the labour market are not possible to determine in the absence of a labour market map. This hinders the advice and guidance that can be given to students about future opportunities.

Oman has a number of industries suitable immediately for a career mapping solution, including:

- Finance.
- Construction.
- Telecommunications.
- Petro Chemicals.
- Aviation and transport.
- Hospitality and Accommodation.
- Tourism and Travel.
- Retail.
- Heritage and antiquities.
- Sport and recreation.

A labour market map defining career pathways and the qualifications required to follow such a map, is critical for young Omanis to plan their futures. However, the Evaluation Project stakeholder engagement survey indicated that Oman would need to address the following barriers:

- Inability to forecast occupations in demand during the next ten years, and identify the academic and applied paths that must be followed by individuals to gain employment in these occupations in the future
- Difficulty in obtaining information and data from government and private sectors about job requirements and advantages of these jobs or occupations
- Insufficient research and specialised websites regarding career guidance in Arabic
- Lack of experts in entrepreneurship in Oman
- Lack of student training programmes directly related to occupations skills development and future labour market opportunities for employees (e.g. retail, hospitality, and tourism).

A number of Ministries, agencies and companies, such as the Ministry of Commerce and Industry, Omantel, PDO, Chamber of Commerce, Ministry of Manpower, Ministry of Higher Education, Ministry of Education and closely associated agencies, are embracing aspects of strategy development to capture career planning and skills pathways for economic development. There appears, however, insufficient coordination and cooperation between the various parties involved in these initiatives. The opportunity to take a collaborative approach and create a collective direction and cooperate on targeted initiatives has yet to be maximised.

The Evaluation Project Team determined that the Ministry of Education had made attempts to gather data on labour market skills requirements from other agencies but with only minimal success. Data mapping of skills and qualifications pathways is essential but, in the absence of a national qualifications framework, it would be difficult to utilise this in an effective way to plan career pathways for young people. What is missing is specific information that shows the following:

- What jobs are currently in the Oman economy across all industries
- What qualifications, skills and knowledge is required to gain available jobs
- What learning process or pathway is required or available to gain available jobs
- Where these qualifications can be attained
- Where currently available jobs may possibly take them on a career pathway
- What the possible financial returns are from different jobs.

The Ministry of Education is cognisant of the need for these information sets. Unsuccessful attempts have been made by the National Career Guidance Centre Directorate to facilitate the development of an initiative to gather this type of data. Such a development would need to be supported by integrated stakeholder engagement of closely associated agencies with systems in place to share and develop processes required for determining accurate present and future labour market requirements.

Noting these and other attempts the Evaluation Project Team has found that the Oman Ministry of Education is fully aware of the challenges it faces in trying to achieve its desired outcomes for Omani learners and school leavers and through initiatives in curriculum and through the National Career Guidance Centre is proactively seeking solutions.

Fully aware	The issue of school leavers not having the appropriate skills and knowledge for higher education and the labour market is well documented; referred to in most relevant Ministry documents and explored in a number of commissioned International and Regional Reports by a large number of reputable institutions from within and outside of Oman.

Feedback from business sector stakeholders participating in the Evaluation Project focus groups supported the finding that the skill and knowledge school leavers bring to their work is below employer expectations. The focus groups also identified their perceptions of where the issues and solutions to the challenges and issued lay.

Below is a summary of the aggregated stakeholder perceptions from the interview and focus group sessions:

Stakeholder perceptions of school leavers and graduates:

- School graduates do not come prepared for higher education study.
- Secondary school leavers are not work ready when they show up for employment
- The academic quality, including levels of literacy (Arabic and English), IT and numeracy, is low amongst school leavers and graduates.
- The personal attributes of young Omanis required for them to be good and productive future citizens is lacking and the Ministry is failing to correct this.
- The work ethic of young Omanis is poor.
- Omani women are more organised, dedicated, precise and persistent than their male colleagues.

Stakeholder perceptions of schools and teachers:

- School facilities are poor.
- It is hard to communicate with schools, as the Ministry insists on too many bureaucratic procedures.
- Concerns from some stakeholders about the professional standing of the teaching workforce.

Stakeholder perceptions of Ministry of Education:

- The Ministry is failing in its obligation to ensure that school leavers meet the requirements of higher education and training and industry.
- The Ministry fails to engage, and communicates poorly with its stakeholders.
- The Education system is expensive for the results achieved.
- It is time to stop having expensive reports done by internationals and time to get something done.
- Ministry engagements with external stakeholders feel unstructured and random.
- Desire for a strong mandate and accountability for an on going working relationship is required between the Ministry of Education and external stakeholders.

The external stakeholder responses provided to the Evaluation Project Team supports a finding, from the external stakeholders viewpoint, that the link between the G1-12 education system and external stakeholders appears tenuous and lacks coordination.

11.5 Responses of the System

Oman's Post Basic secondary education system has been designed around the required skills, knowledge and personal attributes necessary to supply the higher education institutions and the labour market. The system of curriculum, teaching and support strives to provide students who possess the required knowledge, skills and attributes necessary for entry into higher education and the work place. Despite this design, both employers and higher education institutions believe the students presented to them fail to meet the required prerequisites for success.

The Ministry of Education has implemented, is planning, further responses to close the gap between expected and actual graduate outcomes.

Curriculum reform for vocational and technical inclusion

Currently students continue their education at each higher level of instruction by moving progressively through the tiers of Grades 1 to 12. Those who dropout are sometimes reclaimed by vocational education programmes and other non-formal education provision. Others, at Grade 11 and 12, who finish one level of instruction without meeting the requirements of the next are expected to join the workforce or go onto vocational or technical training.

This system encourages students to go as high as they can academically and then when they fail, go to the labour market, or technical or vocational training. There is, therefore, a social stigma attached to technical and vocational education and training; that it is for those who have failed to succeed academically.

Cognisant of this stigma and that many young people are leaving school without adequate qualifications, skills or knowledge to succeed the Ministry of Education has resolved to provide more relevant and worthwhile pathways for these students. The Ministry of Education is aware that changes at the secondary/ higher education interface are required and have suggested the following:

- Increase of vocational curriculum streams in secondary education.
- Integration of technical vocational and general education.
- Increased learning pathways through a well-established national qualifications framework and assessment system.

The Ministry of Education is currently considering two proposals for change to better meet the needs of vocational training and education within the General Education curriculum at Post Basic level: an elective curriculum option, and a streaming option.

Option 1: Elective Curriculum Option

This option proposes that Grade 10 should be integrated into Post-Basic Education and the educational ladder adjusted accordingly. It is proposed that Grades 10 – 12 students study a package of subjects involving a variety of specialisations that enable them to join higher studies at the universities or labour market. The proposed study schedule will be as follows:

- 15 periods a week for 3 core subjects = 5 periods a week for each subject, plus
- 25 periods a week for 5 elective courses = 5 periods for each elective course.

Students are expected to choose the elective courses according to their interests or the career track they wish to follow. The proposed study plan includes all types of learners with different capabilities and attitudes. It gives them the chance to select from a variety of subjects to determine their career tracks. It balances between the difficulty expected in adjusting the current plan (financial allocations, infrastructure, and teacher training) and what the community expects the Ministry of Education to do to develop education and meet the expectations of future employers and higher education institutions.

Option 2: Streaming Option

This option also proposes that Grade 10 is integrated into the Post-Basic Education, and that students at this level choose either an academic or a vocational stream. The proposed actions are summarised as follows:

1. Introduce the academic streams (Science – Arts –Trade) in government schools.
2. Introduce the career track in all 6 Vocational Training Centres of Ministry of Manpower.
3. Adopt a study plan that provides core subjects for the three years 10 – 12 in addition to elective subjects linked with chosen career paths.
4. Make sure that core subjects meet the international standards and Omani society requirements.
5. Ensure students choose their study streams (academic or vocational) at the end of Semester 2, Grade 9.
6. Reduce the number of subjects in Post-Basic Education.
7. Respond to the calls for increasing the number of periods to study science and mathematics.

A Qualifications Framework

A key challenge for Oman's education system is to link the various education and training sectors within the remit of the Ministry of Education, the Ministry of Higher Education and the Ministry of Manpower together in a single framework. The Ministry of Education has released a tender for the creation of a National Qualifications Framework. This is a significant and transformational project for Oman, essential to the further development of work ready graduates, whether from Post Basic or Higher Education.

Due for cross sector development and inauguration within the next two years the new qualifications framework will (i) allow the recognition and transfer of qualifications in the country; (ii) facilitate student's access, mobility and progress into and between various education sectors (iii) and determine validity of qualifications within international contexts. The benefits of the Qualifications Framework project can be summarised as being predominantly in four areas.

1. Benefits for a qualification system and provision of education and training (supply-side) by:
    - Reducing complexity and enabling coherence, transparency and integration (notably in post Grade 12 education in Oman, qualifications are not recognised between public and private.

providers and between different higher education institutions, universities, Higher Education Institutes, training providers, and community training institutes).

- Opening access and enabling progression to further qualifications, independent of whether they are school, higher or TVET qualifications.
- Enabling learners and teachers to identify appropriate learning pathways.
- Providing support for the Oman Academic Accreditation Authority (OAAA) and its existing standards framework.

2. Benefits to career development, guidance and employment placement, information and orientation mobility (demand side) by:

   - Communicating reference points for qualifications and increasing their social acceptance and recognition on the labour market and in education and training.
   - Enabling the mapping of provision and qualifications in relation to skills supply, demand and occupational standards.

3. Benefits to the international and transnational dimension by:

   - Contributing to increasing mobility, cooperation and mutual recognition.
   - Enabling a more in-depth cooperation and the development of mutual trust between providers, teachers and trainers from different countries and world regions (GCC, Europe, Asia- Pacific, North-America, Africa etc.).
   - Promoting recognition, transparency and (credit) transfer of outcomes of (modules) of training, delivered by different providers in Oman and relating them to international qualifications.

4. Benefits to regulation, legislation and institutional arrangements by:

   - Establishing a regulatory framework to support the building of mutual trust and credibility between qualification providers.
   - Establishing reference points for standards in sectors and between sectors.
   - Creating a stable framework for qualifications while at the same time allowing for flexibility and adaptation.

The framework will cover all qualifications (international and national) conferred by all schools (public and private), higher and vocational institutes and universities in the Sultanate of Oman.

Response to demand for Entrepreneurial Skills Development

Several pilot projects and private-sector programmes have been implemented to promote entrepreneurship and to provide entrepreneurship education. They include business stimulation programmes, which promote the launch of youth business ventures through the provision of loans and expertise to recent graduates as a pathway to employment, providing a strong focus on encouraging entrepreneurship.

The promotion and support of this for secondary school students is an explicit function within the study and technical support department of National Career Guidance Centre (NCGC). As stated earlier in this Chapter the NCGC is the Ministry of Education's first responder and at the forefront of entrepreneurial activity and learning for young Omanis in the General Education system. The NCGC supports several publically and privately funded programmes that encourage leadership and entrepreneurship. Selection to these programmes is competitive and administered by the Oman Ministry of Education although the number of students that participate is a small percentage of the total number of school students.

NCGC runs a number of such programmes created to stimulate entrepreneurial thinking and development. Initiatives such as the mentoring, the Injaz Oman programme, Youth Entrepreneurship (Gaytuh) programme, the Sanad Summer programme for girls, the Leadership programme and support for programmes run by Outward Bound and Scouting have aspects of entrepreneurial development to both a larger and a lesser degree. These programmes are for limited numbers of students and success in terms of the on-going development of SME structures is still to be proven.

Sultan Qaboos University (SQU) and The Research Council in Oman have supported the Ministry in research to investigate the entrepreneurial attitudes and trends in high school students, and how the school system supports development of work place skills (Al-Harthi & Al-Jabri 2009). Other research has focused on the emergence of entrepreneurship education and training and reviews relevant programmes and activities in Oman (Khan & Al-Moharby 2007). The Ministry of Education also participates and hosts a range of regional, national and international symposiums and sends staff to participate in international conferences, training events and study tours.

Appropriateness of Responses

System response ratings		
Appropriateness	**Effectiveness rating**	**Efficiency rating**
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

In summary

The overall rating of appropriate is based on the range of initiatives that the Ministry has made towards ensuring that school leavers have the skills and knowledge required to successfully enter higher education and the workforce. These efforts and the proposed future changes correspond to international best practices and reflect a Ministry providing significant initiatives and innovation toward ensuring school leaver life and career education.

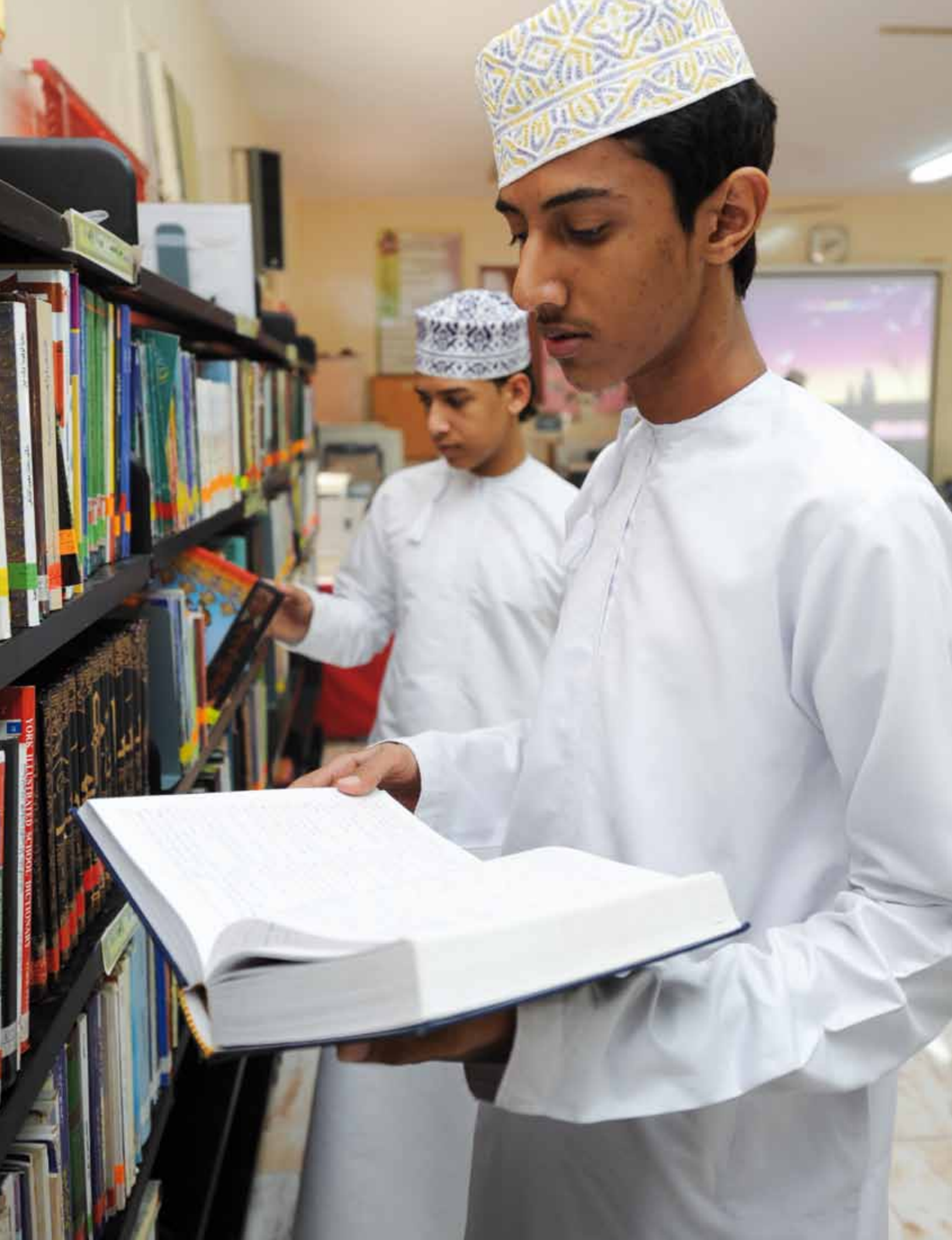
In terms of the second dimension of effectiveness, the rating of 'likely to be effective' reflects the fact that it is too early to tell how well the responses will work. If the changes to Post Basic Education Pathways and the National Qualifications Framework are developed in close co-ordination with internal and external stakeholders then there is a strong likelihood that these will assist in closing the gap between current and desired school graduate outcomes.

Efficiency has been rated as not known. Insufficient information was available to the evaluators to assess this dimension.

Conclusion

The Ministry of Education is well aware of the gap between the abilities of current graduates and desired graduates. It has implemented a number of international best practice initiatives and has further significant initiatives underway. The initiatives currently underway if successfully implemented are likely to address a number of issues and challenges needed to close the gap.

These initiatives require a close and effective engagement with a range of external stakeholders. External stakeholders are indicating that they regard the first steps to a successful engagement are to **strengthen communication, collaboration, and partnership** between the Ministry of Education and themselves.


YORK ILLUSTRATED SCHOOL DICTIONARY

CHAPTER 12

EDUCATION INFRASTRUCTURE

The Terms of Reference for the Ministry of Education Evaluation of the Education System (Grades 1-12) set out the following components for the evaluation of the Education Infrastructure aspect:

1. **School buildings and facilities including:**
   - Suitability and use of school buildings and facilities.
   - Meeting and resource rooms, storage facilities, playgrounds and canteens.
2. **School equipment, IT networks and Internet including:**
   - Suitability and use of equipment – to include classrooms, the Learning Resource Centres, science and computer labs.
   - Network systems and level of Internet connectivity.

Summary

Oman's infrastructure is managed centrally, through a number of sections within the Directorate of Projects and Maintenance. The responsibilities of these sections are broad and covers aspect from the building of new schools and facilities, maintenance, through to equipment procurement. The infrastructure development projects are planned on a five-year basis and are set out in the 8th Five Year Strategic Plan (2011-2015) along with the approved development budgets.

The Ministry achieved limited success in progressing the building development projects and priorities in the 2011 and 2012 years. This is likely to have resulted in continuing and compounding issues for a significant number of schools.

There is an urgent need for system leaders to consider the management practices associated with these building development projects and for system leaders to monitor closely the progress towards achieving the 8th Five Year Strategic Plan (2011-2015) development priorities relating to improving the quality of the building development policies and procedures.

Overall efficiency and effectiveness of capital expenditure can be expected to improve significantly if a programme of inspections and enforcement of building and contractual standards of materials and workmanship is introduced. The adoption of international best practice with respect to maintenance can also reduce overall maintenance costs and extend the useful life of school buildings and related facilities.

In terms of ICT in schools the Consortium notes that there seems to be an over emphasis on technology provision or infrastructure in ICT related projects and interventions. While core infrastructure is fundamental to any ICT activity in education happening at all it is not a goal, outcome or benefit in its own right. Infrastructure has no educational value. It has only one purpose – to allow the stated outcomes and benefits of an ICT strategy to be realised and to support the wider educational aims and goals of the education system. It is recommended that a schooling ICT strategy is developed in alignment with the Oman Digital Strategy.

Any ICT strategy must start with what outcomes and benefits to student learning the programmes and interventions are intended to deliver. These need to be explicit and should include cost benefit analyses that justify the required investment. Once the intended benefits to student learning are expressed the requirements in terms of the equipment, connectivity and environment can be described and justified.

12.1 School Buildings and Facilities

12.1.1 How the system works

The Ministry of Education is the government agency with responsibility for all capital development and planning for school buildings and equipment, which is undertaken by the Directorate of Projects and Maintenance (the Directorate). The Directorate has a substantial operational procedures manual which outlines the ways in which this Directorate operates. The Directorate is headed by a Director General and each of its three Departments - Projects, Maintenance, and Projects Follow-up - has its own Departmental Head.

Projects Department

The Projects Department consists of four sections: Developmental Contracts; Engineering Affairs; Land; and Studies and Estimate.

This Department is responsible for working with the general Directorates and Departments in the governorates to provide land for the establishment of schools and related educational facilities, initiating and completing the building of schools and providing all equipment required for their successful operation. It includes the preparation of specifications and technical conditions for building projects, as well as drawings and contracts for building projects and maintenance.

In addition, this Department is charged with the preparation of a register to record full data from the Contracts Development Unit concerning the number of contractors, consultants and suppliers involved in each project. As well as keeping a record of all graphics, maps, data, contracts and agreements it is charged with determining the quantity and cost of materials required for each building project. The Department receives and reviews all invoices for consultants, contractors and suppliers before sending them to the General Directorate of Financial Affairs for payment. This Department is also charged with inspecting buildings during construction and ensuring compliance with all building requirements and contract specifications.

Maintenance Department

The Maintenance Department is made up of three sections: Devices and Equipment; Restoration; and Building and Construction Maintenance. The Maintenance Department is responsible for periodic maintenance of all buildings, technology and equipment for all divisions of the Ministry of Education and schools. It determines the nature and specifications of the required maintenance and then coordinates the maintenance programme. This Department prepares budgets for maintenance projects, oversees their implementation and provides technical advice to the relevant authorities about designs and installation of new devices and equipment.

The Department also specifies and supplies equipment and technology in coordination with the relevant Ministry of Education department. It is concerned with any changes to building plans, construction components and connections of electricity and water. This Department is charged with identifying buildings that are to be maintained and ensures compliance with the required conditions and specifications.

This Department is expected to set a timetable for the implementation of periodic maintenance for all buildings, devices and equipment. Invoices for maintenance work are received and approved before being forwarded to the Directorate General for Financial Affairs for payment.

Projects Follow up Department

The Projects Follow-up Department is responsible for following up on the implementation of new projects as outlined in the five-year plans. This includes the implementation of projects such as new buildings and additions to existing buildings, as well as the process of acquiring land required for educational purposes. It is responsible for any follow-up work with contractors and consultants regarding the implementation of Directorate projects. It is also asked to prepare periodic reports on the progress of projects and submit them to relevant Directorate officials.

The Minister's office also has a department which is responsible for organising and running the schools hygiene and cleanliness competition.

The *School Buildings Specifications and Standards* sets out the size, access and layout of school facilities, including classrooms, laboratories, administration, utilities and access requirements. This is an extensive document outlining all current building code requirements.

The Directorate of Projects and Maintenance has developed a series of specific action plans that inform the more extensive 8th Five Year Strategic Plan (2011-2015). The strategic plan sets out an overarching goal in relation to the development of schools buildings and school equipment.

Goal 14 (Educational Buildings) is to ***"Provide the needs of buildings and equipment necessary to raise the quality of the educational work."***

This goal is to be achieved by implementing 11 identified programmes, such as:

- Maintain, repair and replace school buildings as required.
- Develop the specifications for school buildings to meet future educational requirements and comply with cost, quality and sustainability policies.
- Build at least one gym in each Willayah or region to enable implementation of the sport programme and competitions.

12.1.2 System Awareness of Issues and Challenges

The Consortium's evaluation of system documentation and key informant interviews has identified that the system has had some significant issues in managing the successful outputs and outcomes of its building development projects.

These issues include:

- Slow tendering processes.
- Delays in obtaining building permissions.
- Insufficient financial allocations against building projects in 2011 and 2012 (now reported as resolved).
- Lack of regional maintenance plans.
- Concerns over funding available for the on-going maintenance of schools.
- Limited Ministry of Education personnel with required skills and expertise for site visits.

These systemic issues have also been reflected in observations made by the Evaluation Project Team on its visits to schools.

Fully aware	The limited progress against several key building development projects is noted in relevant Ministry of Education documents.

These issues have resulted in very slow progress in a number of key areas as set out below.

Student Centred Building Designs

At the commencement of the first Five Year Plan the focus was on the provision of a similar level of education across Oman. The result was a 'one design fits all' approach, as detailed in the *School Buildings Specifications and Standards*, where standard-sized and configured schools were built throughout the country. In general, school building design has not changed in 15 years.

Recent international research, such as the UNICEF "Child-Friendly Schools," programme (UNICEF, 2006) and the OECD, "Innovative Learning Environments" programme (OECD, 2013) outline current thinking for school building construction and classroom design. These programmes, among others, attempt to establish principles and approaches of school design that "promote what are seen as desirable ways of organising learning to achieve what are seen as desirable learning outcomes", (OECD, 2013, p.19). These programmes have the learner and the learners' preferred learning styles and needs as their starting-point. They advocate that school design needs to better address these factors.

Schools that are effectively designed from a learner-centred approach take into consideration the layout of the building, access to natural light and ventilation, effective use of all spaces as possible learning spaces, including areas like hallways and passageways. Students learn well in a range of different purpose-built spaces and schools designed in this manner allow for the flexible use of classrooms.

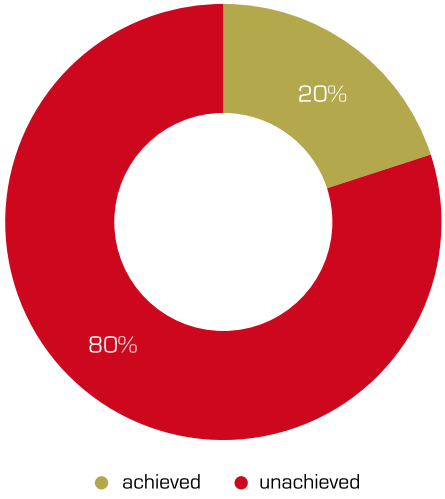
The 8th Five Year Strategic Plan (2011-2015) recognized the need to change the current school buildings templates to cater for a more student-centred pedagogy. The Strategic Plan also acknowledged that some older schools are no longer 'fit for purpose'.

The Strategic Plan set the following goal for the:

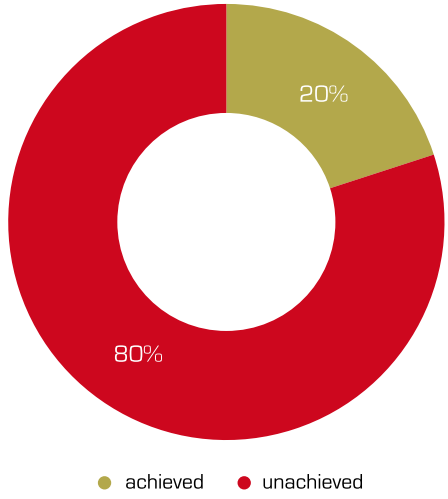
> Development of specifications of the school building to meet the future education requirements and suits with the cost, quality and sustainability.

In 2011 a committee was formed to receive suggestions and ideas, conducting field visits and meetings. In 2012 the committee was reformed however it has yet to report on its findings. The committee's report on progress against the 2011 and 2012 project deliverables are set out in the following pie graphs.

Graph 12.1 **2011 Project Deliverables**



Graph 12.2 **2012 Project Deliverables**



In 2013, the committee arranged visits to a number of countries including Kuwait, Saudi Arabia, Qatar, Australia, Malaysia, South Korea, and Germany to observe school building and facilities designs. The committee has presented a report on the designs observed on these visits. The provision of a student-centred pedagogy has been a key intention of Basic Education since 1998. A major change in desired teaching and learning methodologies is articulated in many key Ministry of Education documents. The slow progress in developing new building specifications is continuing to impact both on new buildings and the renovation of existing buildings.

The schools visited by the Evaluation Project Team that were undertaking current school renovation or upgrading projects were being refitted and supplied on a traditional basic education model. They were not being reconfigured and equipped for a modern learning pedagogy.

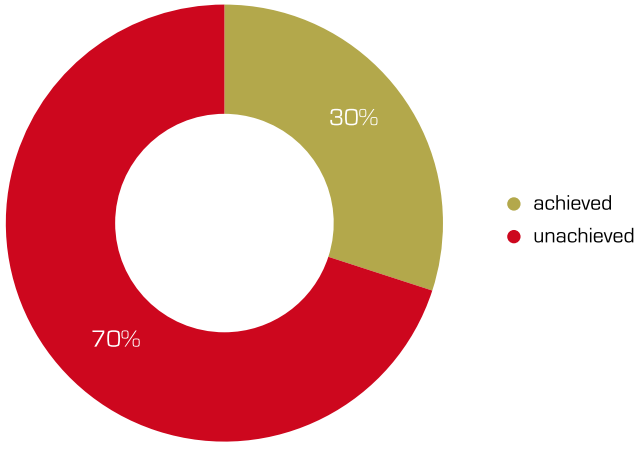
In terms of developing buildings to support the student-centred learning goals of the education reforms it should be a reasonable expectation of stakeholders that at the end of each Five Year Plan new schools, and new buildings in existing schools, should be better and more suited to the current learning pedagogy than those built five years earlier. There is a significant risk that this expectation will not be met at the end of the current Strategic Plan.

A culture within the Department of Projects and Maintenance - encouraging and supporting continuous feedback from users and adoption of international best practice - should lift the standards of school buildings and support the improved performance of learners and the education system in general.

Building Maintenance

The end of 2012 year report by the Directorate General of Maintenance and Projects on the Development project: Maintain, repair and replace the school buildings in need of that, stated that 70% of the 2011 and 2012 work had not been achieved.

Graph 12.3 Percentage of achievement in 2011 & 2012



A key challenge noted in 2012 was that there was no clear plan prepared by the regions for their schools in need of repair, replacement or maintenance. This is of some concern given the need for this was noted in the 8th Five Year Strategic Plan (2011-2015) prepared in 2010:

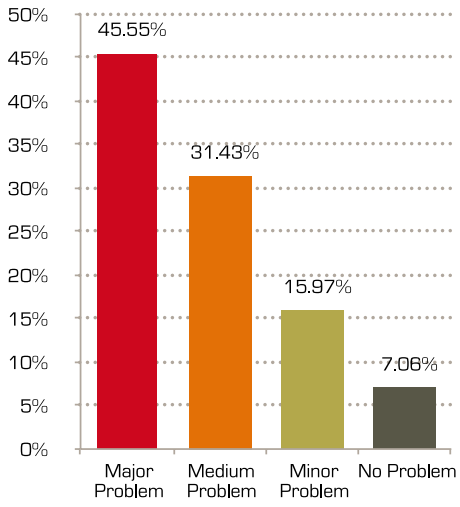
> Prepare a comprehensive and studied plan to identify the governmental buildings and constructions and the schools needed to be maintained and reconstructed or to replace some of its educational facilities.

The Evaluation Review Team visited 37 schools and conducted an online survey of school principals, administrators and teachers to identify their view of school maintenance levels.

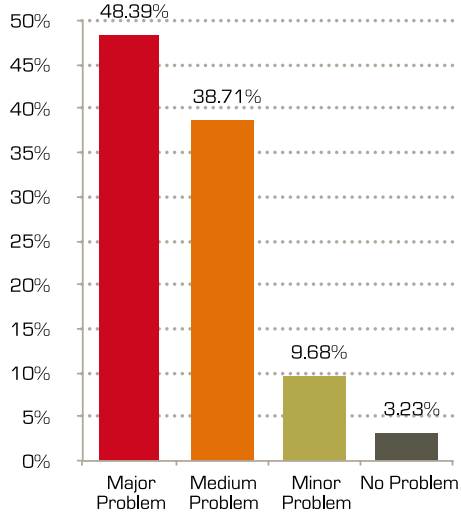
The online survey results reported that 87% of school administrators and 77% of staff consider school maintenance and development to be either a medium or major problem.

Extent of school maintenance and development issues

Graph 12.4 Teachers



Graph 12.5 Admin Staff



Source: Evaluation Project survey data 2013

The Evaluation Project Team visited 37 schools, undertaking visual inspections and assessing them on the overall condition of the school buildings and classrooms in particular. As the graph below – "The school appears well maintained" – indicates, approximately 71% of the schools were assessed by the Project Team as well or mostly well maintained. However, a significant percentage – 29% – displayed a lack of general maintenance of school buildings. During the same school visits the principal in each school was asked how they ensure maintenance issues are attended to. As the graph indicates, approximately 66% of the principals described a systematic approach to building maintenance. However, 34% indicated a one-off or non-systematic approach to this area of managing the school facilities.

School Visit Data Building Checks Overall Impressions – the school appears well maintained, school appear to be safe environments, and grounds well maintained

The case study in this report outlines the specific maintenance issues of one newly built school that the Evaluation Project Team visited. The case study outlines a range of issues that this one school is contending with in the area of on-going maintenance of its buildings.

CASE STUDY

As part of the Evaluation Project, teams of three observers visited 37 schools and an audit of the school buildings and facilities was undertaken. One of the Evaluation Project teams visited a newly built school, situated in an isolated area of Al Dakhaliyah, which had been constructed and opened in 2012. This was a Grade 1 to 12 school that had also initiated two kindergarten classes for approximately 40 children aged between three and four years of age.

Facilities not fit-for-purpose

Due to the school's isolated location, 14 bus drivers were employed to cover long routes to rural homes. The drivers were expected to utilise the single guard-house, designed for two people, during school hours between driving duties. The space was insufficient to accommodate the number of drivers it needed to serve. There were no other available facilities outside the core school area that could house the drivers. Policy requires that the drivers do not enter the core school grounds.

The school layout did not take into account the nature of the school and the community it serves. One of the kindergarten rooms was located on the first floor of the building on the opposite side of the courtyard from a ground level kindergarten room. The distance between the two classes makes it difficult for the two kindergarten classes to share resources and required some of the young children to navigate stairs, and the senior area of the school, in order to reach their classroom.

A number of design flaws were identified, such as a grill in the water area that could not be lifted for cleaning. This indicated that either not all of the specifications for the school design are fit-for-purpose, or this particular school was not built to code specifications. In either case, this work had not received an adequate pre-occupation building inspection to have identified this, and other similar issues.

The school also lacked a number of basic amenities, including: a shade cloth or covered outside area; a paved parking area; and an access way to the school. There also appeared to be poor planning for the anticipated growth in the school roll and this is likely to result in insufficient classroom space within five years.

Current condition of the buildings

Although the school has been constructed recently there was evidence of poor quality workmanship and construction materials. Water damage from leaks was already evident in the administration block, canteen and some classrooms. It is anticipated that further weakening of the building materials, and on-going construction issues such as mould growth, will follow. There was no immediate remediation plan for the affected facilities.

The fence surrounding the school had been completed after the school was opened. The lack of security at the school, particularly given the presence of a kindergarten cohort, resulted in some students being able to leave the school grounds. This indicated to the Evaluation Project Team that the school was not sufficiently secure for young children. At the time of the site visit a front section of the fence was undergoing repair for the third time. The section for repair was directly next to the school canteen and close to the waiting area for buses. The risks identified by this hazard included the risk of a wall collapse, particularly given the previous poor performance of the wall.

Construction debris around the work site and uncompleted paving could cause injuries (tripping, cuts from discarded metal etc) in this busy part of the school. There was no safety information or barriers to prevent students wandering onto the worksite.

Capital asset management principle

There appeared to be an absence of the application of capital asset management principles to this school building project. The centralized and standardized approach to the school-build did not appear to take into account the needs of this particular school and its community, both now and in the future. This appeared to have resulted in a lack of a sense of ownership by school personnel for the buildings. The local contribution to the school-build appears to have focussed mostly on aesthetic factors, such as tiling the lower walls to prevent marks from the children, wall paintings, etc.

Project Evaluative Team reflections

The repair work already required on this new school indicates that the facility's lifetime costs will be high and they do not appear to have not been planned for in a maintenance or replacement programme. The increase in the Directorate's maintenance workload may result in delays to complete work and place additional strain on the Directorate's budget in the long-term.

A greater level of understanding and planning is required for a building with an approximately 40-year life expectancy. This outcome can be achieved by:

- Enforcing high initial building standards.
- Building into the initial design and construction the ability to adapt the building and other facilities to changing requirements.
- Periodic, say every five years, strategic planning reviews in conjunction with the school community to determine what will best suit the needs of the community and the school.
- Implementing a regular and preventive maintenance programme.

A school, particularly in a remote area, can become an important social focal point for the community it serves. Engendering support for the school within the local community increases levels of community support, enhances the need and benefit of education to the local people and may encourage the community to provide funds for additional equipment etc. that cannot be funded by the Directorate.

International capital asset management practices have accepted that undertaking regular maintenance programmes and repairing problems when they arise, rather than waiting for them to deteriorate, is the most cost effective approach. The issues in relation to school property maintenance noted by the Ministry of Education and confirmed in the building observations checks completed by the Evaluation Project Teams raise concerns about the efficiency and increased costs associated with current approaches to building maintenance.

Completion of Buildings/Renovations To Specification

The 8th Five Year Strategic Plan (2011-2015) noted that:

> Some school requirements, like activities rooms, teacher rooms, administration rooms, labs, multipurpose halls, learning difficulties rooms, facilities have not been covered due to deficit in financial allocations.

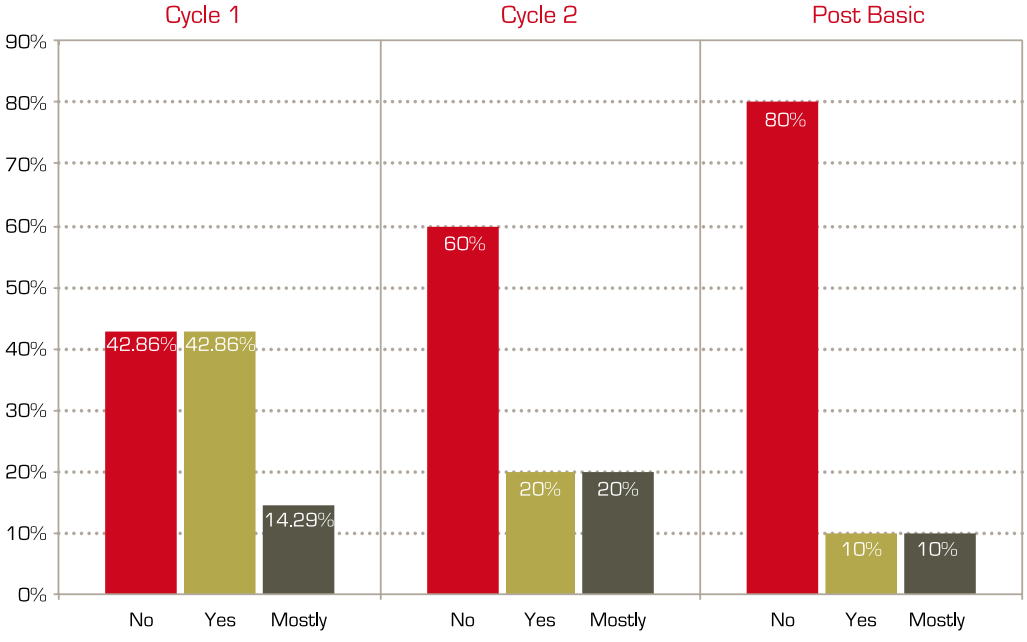
And that

> Lack of engineers and experience at the educational directorates with responsibility for completing location visits to approve them.

Analysis of the current situation in the 8th Five Year Strategic Plan also noted that a number of schools did not have the required number of buildings or amenities that should have been provided when the school was built. The Directorate has acknowledged that the Goals of the Seventh Five Year Plan with respect to classrooms, science laboratories, learning resource centres, activities rooms, teacher rooms, administration rooms, multipurpose halls and learning difficulties rooms were not achieved for some schools in the 2006-2010 period. The provision of these buildings has been included in the Goal for the Eighth Five Year Plan.

The Evaluation Project Team school visits identified a significant number of schools that did not have Ministry of Education-specified facilities. For example, the provision of shade cloth coverings for the central courtyard was included in the school building checklist. As the graph, "Students have adequate shade to play under," depicts, the project team assessed 43% of Cycle 1 schools, 60% of Cycle 2 schools, and 80% of Post Basic schools as lacking adequate shade shelter.

Graph 12.6 Student have adequate shade to play under



Source: Evaluation Project survey data 2013

In almost all the schools visited there were no covered facilities or purpose-built spaces for sports programmes, other than the central court assembly areas.

Classroom observations identified that the sun's glare makes it difficult to operate effectively in many of the classrooms. Only in 29% of Cycle 1 schools, 27% of Cycle 2 schools and 20% of Post Basic schools sufficient protection was provided.

The Evaluation Review Team notes the significant progress made in Oman over the last 43 years to bring a high level of education to all children in Oman. It is time to ensure that all new schools are handed to school administrators with the full complement of buildings and associated facilities such as shaded areas, fences etc. Ensuring that classrooms are protected from the sun's glare is a very basic problem and should be resolvable at minimal cost in existing buildings, using good quality shade material, and included in the design of new or renovated buildings.

12.1.2 System Responses

Limited progress against several building development projects		
Appropriateness	Effectiveness rating	Efficiency rating
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

Response rating – appropriate response

The rating of appropriateness is arrived at by taking into account the range of development projects that the Ministry set out in the 8th Five Year Strategic Plan (2011-2015).

The needs of the school system appear to have been well identified and the strengths and weaknesses of the previous five year period appear to have been well considered.

The Consortium commends the following development priorities set out in the plan:

- Increase the technical cadres of the educational regions and qualify them widely so they can always follow up the projects with more authority.
- Set specific criteria and measurements of the mechanism of selecting the invited contractors to participate in the tenders to construct the governmental buildings and address the Tender Board on this domain.
- Expand tenders to be international suppliers.
- Suggest raising the value of the imposed fines for contractors delaying the implementation and the submission of the project after the scheduled timetable specified for it.
- Prepare a comprehensive and studied plan to identify the governmental buildings and constructions and the schools needed to be maintained and reconstructed or to replace some of it educational facilities.

Effectiveness rating: partially effective

A rating of partially effective is given because despite the wide range of planned development priorities there has been limited success in progressing the building development projects and priorities in the 2011 and 2012 years. This is likely to have resulted in continuing and compounding issues for a significant number of schools.

The Ministry of Education has recognized and acknowledged the issues and challenges it faces. The level of this recognition, and its inclusion in the Eighth Five Year Plan, is commendable. It is in the implementation of the programmes to achieve the building development goals and priorities that there is weakness.

There is an urgent need for system leaders to consider management practices associated with these building development projects and for system leaders to monitor closely the 8th Five Year Strategic Plan (2011-2015) development priorities relating to improving the quality of the building development policies and procedures.

Efficiency rating: not efficient

The not efficient rating reflects the Ministry of Education's own identification of building issues arising from the current approach to tendering, quality assuring and managing the sign-off of new buildings and its acknowledgment of the largely reactive nature of its building maintenance programme.

The Ministry needs to prioritise its plans to ensure its policies, procedures and staff are:

- Enforcing high initial building standards.
- Building into the initial design and construction the ability to adapt the building and other facilities to reflect changing education requirements.
- Carrying out periodic, say every five years, strategic planning reviews in conjunction with the school communities to determine what will best suit the needs of the community and the school.
- Implementing a regular and preventive maintenance programme across its school building stock.

Consideration should be given to ways in which the efficiency of facilities can be improved, in particular, investigating the use of school facilities by the wider community.

Conclusion

The Ministry achieved limited success in progressing the building development projects and priorities in the 2011 and 2012 years. This is likely to have resulted in continuing and compounding issues for a significant number of schools.

There is an urgent need for system leaders to consider the management practices associated with these building development projects and for system leaders to monitor closely the progress towards achieving the 8th Five Year Strategic Plan (2011-2015) development priorities relating to improving the quality of the building development policies and procedures.

Overall efficiency and effectiveness of capital expenditure can be expected to improve significantly if a programme of inspections and enforcement of building and contractual standards of materials and workmanship is introduced. There can be a reasonable expectation that construction contractors will soon understand that the use of appropriate building materials and a high level of workmanship is the only acceptable outcome for the Directorate once payments are delayed and remedial work is required in a few initial instances.

Avoidance of a 'single point of failure' must be a key part of the quality and authorization process. It must be transparent with the contractor able to appeal to a higher authority if unreasonable difficulties are encountered in the approval and payment process.

The adoption of international best practice with respect to maintenance can reduce overall maintenance costs and extend the useful life of school buildings and related facilities. The use of effective capital asset management practices can ensure that quality services are provided in a cost effective manner. Such cost effectiveness planning would include:

- Building schools and associated facilities that are made of quality materials and to an acceptable level of workmanship that is appropriate for the expected life of the buildings.
- Taking into account projected changes in student numbers in the short, medium and longer term.
- Engaging with, and securing the support of, the local community to foster pride in the school.
- Providing for the potential use of school facilities by the wider community in view of the isolation and lack of other community facilities.
- Implementation of a long-term maintenance programme that is proactive and preventative rather than reactive.

12.2 School Computer Networks and Internet

12.2.1 How the system works

School Equipment

The provision of buildings, playgrounds and other physical facilities provides the structure for a school as a place of education. The purpose of these physical facilities is to provide a place where suitably qualified and trained teaching staff can undertake their responsibility to teach students. In the past, using a teacher-centric teaching pedagogy, the teacher lectured students who absorbed that knowledge by rote and answered questions at the end of the year in an examination.

Teaching methodology has developed significantly in the last century and teaching is now a more dynamic process that requires the student to think about new ideas and concepts, rather than just accept what the teacher expounds. The use of teaching material and support equipment, ranging from books to audio visual equipment and online resources, enables a richer learning environment and experience for the student and allows students to move at their own pace through areas of study.

The availability and use of these teaching resources is critical to modern learning. A science course without laboratory facilities to conduct experiments to demonstrate scientific facts and phenomenon will not have the same outcomes for students as one where imparted knowledge can be tested, confirmed and expanded upon in a suitably equipped laboratory.

Today, electronic media and the use of computers and other electronic devices, is becoming increasingly important worldwide as a teaching tool. Electronic resources have not replaced more traditional teaching resources but they can add a greater level of richness and knowledge at a much reduced cost. Access to the internet allows searching of much more research material than could be financed by a library of books. Specialist and inspiring teachers can be made available to students everywhere by online lecture or classes. Online learning can be supplemented by class teachers or specialist teachers able to help students grasp concepts and develop their knowledge.

Access to greater resources and knowledge is only possible if teachers and students have access to appropriate teaching resources. The provision of teaching resources can be expensive and requires constant updating and upgrading. It also requires specialist support in the form of computer networks and support staff who understand the technology and can assist teachers and students maximise its potential.

To support the implementation of its goals in relation to the use of ICT equipment, the Ministry of Education undertook a system-wide review of school computer capability, hardware distribution and

access to the Internet. This report, the Survey of indicators of ICT in education sector (Grades 1-12), was published in January 2011. Among its key findings were:

- 19% of students using the Internet at school.
- 89% of students using computers in school.
- 1 to 12 student computer ratio.
- 41% of computers at school were available for educational purposes.
- 89% of schools had learning resource centres.
- 69% of schools had computer laboratories.
- 89% of teaching and administrative staff use the Internet.
- 69% of schools used television for educational purposes (Ministry of Education 2011e).

Learning Resource Centres

Most schools in Oman now have a Learning Resource Centre. Each Learning Resource Centre is required to be equipped with a standard level of equipment to support teaching staff in the school.

The Ministry of Education published a Learning Resource Centre Guide which set out the findings of a quantitative and qualitative review of these Centres. During June 2010 a survey was carried out that attempted to collect quantitative evaluation data such as the collection of numbers or data for lending statistics, sets, facilities, available materials, number of classes using a Learning Resource Centre, number of lessons, number of visitors daily and monthly etc. The Learning Resource Centre review team considered that this quantitative data would not be sufficient without merging it with qualitative evaluation data. This qualitative data included using audit lists, surveys and interviews with Centre users to identify how much they were satisfied with services delivered and available resources and facilities.

The review considered the role of the Learning Resource Centre Specialist to be one that included: guiding students to be familiar with the resources places; how to select resources; use and evaluation of resources; and how to produce information (reports). The review went on to explain that learning these skills becomes more effective if integrated into curricula.

In particular, the development of IT skills and the on-going professional development of the Centres' staff were considered important. In addition the review recommended improving the level of equipment available and the furniture in the centres to comply with international standards. The review also suggested re-considering the location and spaces in the centres to comply with international standards and the needs of public beneficiaries, particularly given the lack of public libraries across Oman.

The Learning Resource Centre review team suggested that students should improve in the following skills by using the Learning Resource Centre:

- Identification and use of resources, tools and facilities.
- Study, research, using references and critical thinking.
- Content understanding.
- Recall information.
- Reading for lifelong learning.
- Conducting research (Ministry of Education, 2010d, p. 23-28).

The *Learning Resource Centre Guide*, developed during the 2010 review, provided an extensive list of recommendations concerning the on-going development of Learning Resource Centres in schools. The review recommended the need to develop a clear Learning Resource Centre vision and a specific role description for the specialist responsible for the Centre. The review recommended that the Centres needed to be effectively managed and efficiently used. They suggested the writing of a series of policies including:

> A policy of the annual inventory, policy of building groups, a weeding and exclusion policy, policy on levels of descriptive cataloguing, an objectivity indexing policy, a classification policy, a policy on indexing, a policy on gifting and an exchange policy of purchasing and supply, a policy on default groups, as well as lists of periodicals proposed, and a proposed book list supportive for the curriculum...) (Ministry of Education, 2010d, p. 44-45)

The Evaluation Project Team was asked to assess specific resource classrooms including the Learning Resource Centres' science and computer laboratories, and the career guidance rooms.

From the data collected by the Evaluation Project team on school visits, the Consortium found that the computer laboratories (60% Cycle 2, and 70% Post Basic) and Learning Resource Centres (71%, Cycle 1, 64% Cycle 2 and 60% of Post Basic) were generally the most well maintained rooms. Within the Cycle 1 schools, however, 14% of Learning Resource Centres were assessed as being poorly maintained. The assessment of Learning Resource Centres included one on the equipment and resources available. The Evaluation Project Teams assessed the number of computers and power points, condition of wall display areas and the room's partial use as a library. The majority of Learning Resource Centres were assessed as having well maintained equipment and resources, including 67% of Cycle 1, 77% of Cycle 2 and 80% of Post Basic Learning Resource Centres. In 17% of Cycle 1 schools the state of the equipment and resources were assessed as being poorly maintained.

With respect to the career guidance rooms only 47% of Cycle 2 and 37% of Post Basic schools were considered to be well maintained. In the case of science laboratories only 27% of Cycle 2 science rooms were well maintained compared to 60% at the Post-basic level.

12.2.2 System Awareness of Issues and Challenges

The 8th Five Year Strategic Plan (2011-2015) includes a current performance analysis by the Information Technology Directorate that identifies a range of issues: need for maintenance of the e-portal; limited provision of sufficient skilled technicians; on-going teacher development needs in IT; on-going support required for Learning Resource Centres and computer laboratories; need for upgrading computer hardware and software; as well as the slowness experienced in transferring various curriculums into an electronic curriculum format.

The reasons given for this lack of progress in some areas included:

- Lack of professional expertise.
- Unavailability of high-specification devices for those undertaking this work.
- Weakness of Internet access in general.
- Lack of funds to purchase necessary licences.

The Strategic Plan performance analysis also reports on the difficulty of providing adequate technical support services across all parts of the Ministry of Education. This difficulty is explained as being due to a lack of computer technicians and a need to increase the skills of current technicians. It notes a significant deficiency in the computer devices in schools, regions, Directorates and the Ministry of Education itself. It notes further the need to increase the number of devices, the specifications of these devices, and to plan for the replacement of old devices.

The report comments on the issues facing the data centres. These include the need to consider deactivating regional data centres completely due to a lack of experience of personnel that administer these centres.

The conclusions from evaluating these documents is that the key issues faced by the Ministry of Education are: the difficulties in meeting expectations that schools, teachers and learners have in relation to Internet access; and in meeting their expectations about receiving and maintaining IT devices to connect to the Internet.

Fully aware	System leaders are fully aware of the difficulties that schools, teachers and learners face in relation to Internet access and receiving and maintaining IT devices to connect to the internet.

The evaluation of school networks, equipment and Internet access shows a strong awareness of the issue. This system awareness is supported by the Evaluation Project Team visits and engagements with schools.

These are significant issues for the Ministry. The provision of computers, schools networks and access to the Internet are becoming increasingly important in education. The capital cost of introducing this technology can be high and it requires ongoing maintenance and upgrading as the technology evolves quickly. Specialist IT staff are required to install, monitor and repair computers and networks. Teaching staff require ongoing training in the use of the technology.

The issue the Ministry faces is not simply one of poor Internet access for its schools. If this issue were removed immediately the Ministry would then face a significant financial cost associated with:

- Providing and maintaining devices and supporting technology.
- Providing skilled and experienced support staff.
- Provision of training to schools and teachers to utilize the technology.

To reinforce this point the Evaluation Project Team observed very little utilisation of information technologies in 65 schools visited over the course of the project. Very few teachers used a laptop, a classroom computer, or data projector in their classroom practice during the observation visits even when these were readily available in the schools. Little student-use of digital technology was observed in any classroom visited outside of the Learning Resource Centre or computer laboratory. While most schools had either a Learning Resource Centre or a computer laboratory, these computers were also rarely in use during the Evaluation Project Team visits.

School staff commented that difficulty to access the Internet was the key constraint. School interviews and online surveys also indicated that the age/condition/support for IT technologies were also constraints. For example the online survey indicated that 40% of respondents had fundamental concerns about the ICT equipment in their school.

Issues with ICT equipment identified frequently included:

- Lack of sufficient computers for average class sizes.
- Aging nature of the computers that were currently in schools.
- Insufficient technical support to have the ICT equipment run smoothly.
- Inability of schools to meet maintenance costs of existing ICT equipment.
- Slow system response to resolving ICT equipment maintenance and replacement issues.
- Comments by students and younger staff that the ICT equipment in their home environment was much newer that the school environment.

12.2.3 System Responses

The Directorate of Information Technology acknowledges the lack of operating technology, specialist support and training of teachers in the use of information technology at some schools and is taking significant steps to try and rectify the situation.

The 8th Strategic Development Plan (2011-2015) of Information Technology Directorate outlined three goals supported by action plans for the development of school networks and internet:

- Ensure activating Learning Resources Centre and computer labs.
- Provide the electronic education services and monitor implementation.
- Provide technical support services for the schools and the Ministry of Education.

Meet the expectations that schools, teachers and learners have in relation to Internet access and in meeting their expectations about receiving and maintaining IT devices to connect to the Internet		
Appropriateness	**Effectiveness rating**	**Efficiency rating**
Appropriate Partially appropriate Not appropriate	Effective Partially effective Likely to be effective Not effective	Efficient Mixed efficiency Not efficient Not known

Response rating; partially appropriate

The IT Directorate's action plans set out an extensive list of development priorities in response to these identified weaknesses in school networks and Internet access. These priorities included significant upgrades for school computer hardware, the provision of sufficient technical assistance to maintain this hardware, and the training of teachers to use these facilities in their programmes.

The Consortium considers the quality of these responses is partially appropriate. The key rationale for this rating is that the planned approach appears to be a reactive rather than proactive approach to meeting the expectations of schools, teachers, students and their communities.

The responses do not appear to be based on an initial or ongoing engagement with the stakeholders whose expectations the Ministry is trying to meet. The plan is based on a supply-side model. That is, it is predicated on the basis that the Ministry will supply technologies and that schools will then use them. A more successful way of meeting (and managing) stakeholder expectations would start from the basis

of on going engagement with schools. This would seek to understand schools' expectations and enable schools and the Ministry to plan together which of these expectations could be met over time within the constraints that schools and the Ministry face together.

Overall without these engagements there seems to be an over emphasis on technology provision or infrastructure in any ICT related projects or interventions. While core infrastructure is fundamental to any ICT activity in education happening at all it is not a goal, outcome or benefit in its own right. Infrastructure has no educational value. It has only one purpose – to allow the stated outcomes and benefits of an ICT strategy to be realised and to support the wider educational aims and goals of the education system.

As demonstrated in this chapter, current levels of reliability and quality of ICT equipment and connectivity are a cause of frustration to schools and users so there is both a demand and a degree of pressure (through user frustration) to improve the connectivity and internet access.

However ICTs are expensive and require significant capital investment and this should not be made without a deliberate, planned and strategic approach.

Every educational jurisdiction in the world has recognised the importance of ICT in both the modern world we live in and in a modern education system. The inclusion and integration of ICTs in education has been synonymous with education reform and modernisation since the late '90s and has been both the cause and the vehicle for delivery of many large scale education change programmes around the world.

Any ICT strategy must start with what outcomes and benefits to student learning the programmes and interventions are intended to deliver. These need to be explicit and should include cost benefit analyses that justify the required investment. Once the intended benefits to student learning are expressed the requirements in terms of the equipment, connectivity and environment can be described and justified.

The diagram here shows the different aspects that need to be considered in an ICT strategy.

Table 12.1 Aspects of an ICT Strategy

Benefits Layer	System Level Goals / Student Learning Benefits / Tertiary & Industry Readiness				
Context Layer	Administration		Communications		Curriculum
Application Layer	Software, Applications, Online information and tools (Creatively / Productivity / Informational / Social)				
Operational layer	Operational Systems / Security / Identity Management / Safety / Transfer Protocols				
Foundational infrastucture	Internet Access / Secure Education Network / Access Technologies / Central & Cloud based Datacentre and Storage				

The bottom layers provide a platform for the educational value to be realised from the upper layer activities taking place.

This diagram does not portray the other critical element of teacher professional development and training. Professional development and training is a critical component of the success of any ICT strategy. Professional development and training must also focus on the two elements that are involved:

1. Skills based training – Learning to use the technology effortlessly and ubiquitously.
2. Pedagogy development – Learning to use technology in the learning process and to improve teaching and learning outcomes.

The main benefits that ICT offers education are:

1. Improved administration and use of data without increasing administrative burden in schools.
2. Greater student learning opportunities through more interesting curriculum and more engaging pedagogy.
3. Greater preparation of the student population for tertiary study or the job market.

These main benefits can be broken down to:

- Student Learning/Curriculum
  - Greater levels of student centred learning achievable.
  - Greater student engagement in learning.
  - Students feel greater relevance in education.
  - Digital Curriculum is more responsive, engaging and targeted.
- Communications
  - Wider audience for student participation.
  - Greater involvement for/with remote schools.
  - Greater access to expertise and wider community.
  - Greater peer interaction through educational social media.
- Administration
  - Reduced administration for teachers.
  - Better use of data in decision making.
  - Better use of data in student learning.
  - Greater efficiency in regulatory requirements.

Any infrastructure programme should then address the support and delivery of those requirements stated. In this way the investment required is entirely appropriate and justified.

Having said that the appropriateness of infrastructure is often controversial. Depending on the stated benefits, appropriate infrastructure should take into account;

- Sufficient broadband for multimedia streaming with little latency.
- Closed networks to allow a safe environment for schools and students to operate.
- Identity management to ensure security for users.
- Network, storage design to allow creativity in the activities (more than just sending emails and typing documents).
- Access by a variety of devices.
- Networks designed to reduce the technical support and maintenance requirements and burden on end users.
- Access anywhere at anytime.

With a well planned, innovative, inclusive and student focused ICT strategy, the education system and the student population can greatly benefit, the investment can be quantified and is appropriate.

Effectiveness rating: partially effective

The rating of partially effective is appropriate in view of the fact an increasing number of schools are considered to have the hardware, software, specialist technical support and teacher training to deliver the curriculum using supplied ICT technologies and available Internet.

The partially effective rating reflects the limited progress made by the Information Technology Directorate in implementing development projects over the last three years. The Information Technology Directorate 2012 report against the development project to update the devices, programmes and equipment required for the electronic work at schools and the Ministry noted that only 26% of deliverables had been achieved.

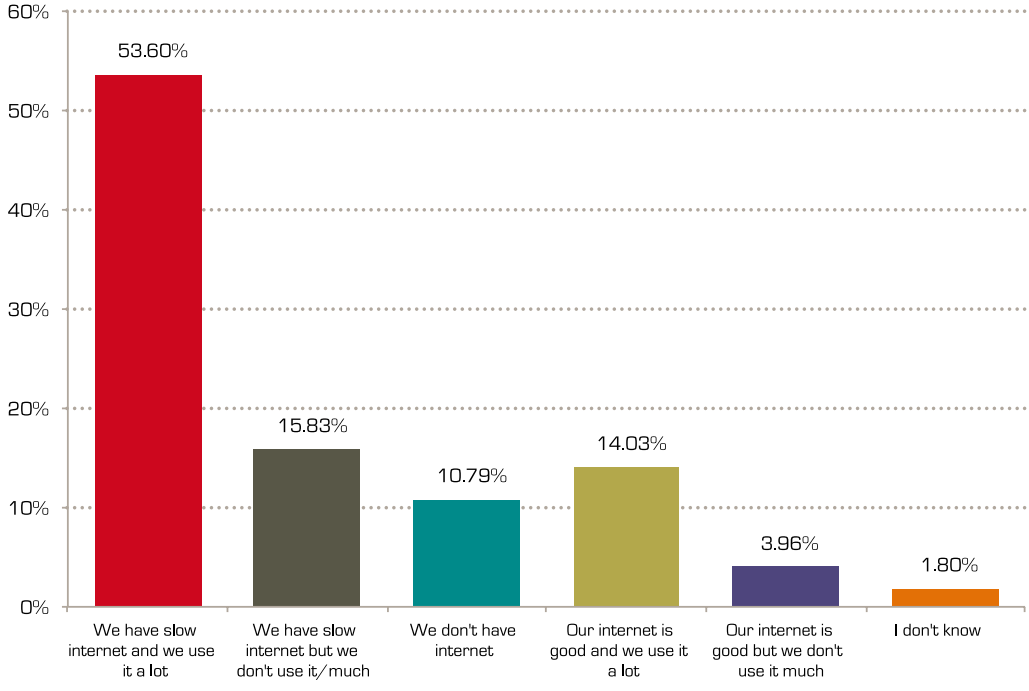
A key constraint noted was that there were insufficient financial allocations to replace warranty- expired devices. Concerns were also raised about the speed of tendering processes.

Efficiency rating: mixed efficiency

The focus of the 8th Five Year Strategic Plan (2011-2015) is principally on equipment-provision, continued development of curriculum supported by digital platforms and of on going training and technician support. The Consortium would suggest that the focus could be better placed on the outcomes required. If the move to a modern, technologically confident workforce is important to the Sultanate, then the education system needs to measure and monitor how well it is performing in this area. Currently the system is making significant investments in IT infrastructure but with little sense of whether it is making a difference or not.

Additionally, the Consortium observed that Internet access for most schools visited was generally poor. The data graph (below), "Which statement best describes your Internet access" suggests, that 18% of schools had good Internet access, 69% had slow Internet access and 11 % had no Internet access at all. This appears to be similar to the Internet access identified by the 2010 *Survey of indicators of ICT in education sector (Grades 1-12)*, i.e. no indication of Internet access improvement over the last three years.

Graph 12.7 Which statement best describes your internet connection?



Source: Evaluation Project survey data 2013

In the online survey the adequacy of ICT equipment was considered to be either a medium or a major problem by 87% of administration staff and 79% of teachers. Fewer than 10% of both groups considered ICT equipment not to be a problem. This is a significant variation in views since the 2011 survey.

Conclusion

ICTs are now a critical part of the modern society and core to that societal change is a modern education system. There are many advantages and benefits of inclusion of ICTs in the teaching and learning process and also the monitoring, supervision and support of schools at the administrative level.

Critical to the successful implementation and integrated use of ICT in teaching, learning and administration is a fast, reliable and robust foundational architecture, technology of various kinds to access that architecture and reasons for that technology and architecture in the form of information sources, curriculum resources, learning applications and objects, communication channels and tools to assist the teaching process, (e.g. assessment and data analysis tools and student management systems).

There is considerable research that shows that the provision of infrastructure and equipment alone does not increase learning outcomes or increase the effectiveness of education or the education system. How ICTs are used and for what purpose are significantly more important aspects to successful outcomes than simply providing them or even the extent of that provision.

Before any significant investment is made in technology architecture or equipment provision, an ICT Strategy should be developed that is designed within a designed Enterprise Architecture that makes it very clear how different aspects of the architecture and equipment provided interact and support all of the teaching, learning and education system level goals for the Sultanate of Oman. Any ICT strategy would take into account technical, pedagogical and human capacity development.

The development of an ICT strategy needs to include consultation with the governorates, schools, teachers, students and the community to see what is important to them and to generate an enthusiasm amongst all stakeholders so that at the time a strategy is implemented it is received as a response to a demand. This report demonstrates that that demand is already developing.

An ICT strategy will provide a support platform to current projects such as the Assessment centre and the Specialised Centre for Teacher Training and would provide a structure for the planning and implementation of all future education projects and interventions. All future education programmes and activities should identify how they utilise ICTs in their implementation or outcomes and how they interact within the enterprise architecture. This is to avoid any duplication of technologies and unnecessary expense which has been an issue for ICT integration in education for many years.

A robust technical infrastructure that has been designed to support the learning, teaching and administrative needs of all stakeholders through an innovative and coordinated strategy and structured and governing enterprise architecture then becomes the catalyst for future innovation and creativity.

Once all stakeholders become aware and familiar with the advantages of effective ICTs they begin to look for innovative methods and solutions to improve the educational outcomes that the new technical environment offers.

CHAPTER 13

ASPECT EVALUATION METHODOLOGY

The methodological intent of the Evaluation Project was not to repeat previous standard evaluative study methodologies (Investigate system – Identify issues – Make recommendations) as this has been done before and many, if not most, of the issues are already known to the system. Some issues are currently already being addressed with quite major responses.

The intent of this study was to provide a pathway forward allowing previous momentum, including that built up over the course of the study project itself, to be maintained.

13.1 Purpose and Intent

The methodological intent of the Evaluation Project was not to repeat previous standard evaluative study methodologies (Investigate system – Identify issues – Make Recommendations) as this has been done before and many, if not most, of the issues are already known to the system. Some issues are currently already being addressed with quite major responses.

The intent of this study was to provide a pathway forward allowing previous momentum, including that built up over the course of the study project itself, to be maintained.

The expected deliverable of the Evaluation Project from its initiation was to provide an action plan, with supporting evidence, for system level recommendations that are core or critical to that momentum being maintained or a pre-requisite to the success of following projects, responses and interventions.

With this in mind the data collection process was not standard in that it was not specifically looking to identify issues. Rather, it was to build an evidential basis for the high level recommendations and/or the prioritising of future activities around and in the action plan. The data were not intended to pin point issues or items of need but to provide a critique of the system as a whole.

13.1.1 Triangulation

The Evaluation Project utilised data and methodological triangulation as part of its overall methodology in data collection and analysis.

Data triangulation involves using different sources of information in order to increase the validity of a study. These sources included stakeholders such as participants, other researchers, and community members. During the analysis stage, feedback from the different stakeholders was compared to determine areas of agreement as well as areas of divergence. In the Evaluation Project the different sources of information included school principals, senior teachers, administrative staff, students, parents, other researchers (in the form of previous evaluative reports), and Ministry of Education staff.

Methodological triangulation involves the use of multiple qualitative and/or quantitative methods to conduct the study. For example, results from surveys, document reviews, and interviews could be compared to see if similar results are being found. If the conclusions from each of the methods are the same, then validity is established. The Evaluation Project used document review, semi-structured and qualitative interviews, physical observations and surveys in its triangulated analysis process.

Not all sources and methods were engaged in all triangulated analysis but combinations of each were used when appropriate.

When data are triangulated, anything that appears contradictory may not be inaccurate as pure statistics may suggest, but rather can add another layer of context and offer reason or motive for the apparent contradiction. In this way triangulation for this project was not only utilised to increase validity but to help in 'telling the story' behind and around the data. This supports and provides a basis for the higher level recommendations of the final report (at the system level), and avoids the need to match all the specific issues raised in the data with a myriad of specific corresponding recommendations (at the symptom level).

13.2 Study Tools

The study tools selected for the evaluation of the Oman Education System (Grades 1 to 12) are listed below with a description of the general methodology, rationale and any challenges faced when using the tool.

13.2.1 Online Survey

Self Evaluation Framework Online Survey

As part of the initial self evaluation framework (refer Chapter 15) an online survey was conducted as a qualitative exercise to establish the views and overall tenor of the schools and Ministry of Education. Teachers, students and administrators in selected schools were invited to participate in this survey, as well as Ministry of Education staff. As a precursory qualitative exercise it was never intended that this data set would draw any conclusions wider than the self evaluation framework project or be a representative sample of the wider school population.

Table 13.1 Respondents to self evaluation framework Online Survey

Respondent	Number of Respondents	
Student	2609	From 19 Schools
Admin	121	From 22 Schools
Teachers	594	From 22 Schools

As well as serving the initial intended purpose the data collected through this exercise were later used to identify potential areas of interest or hypotheses that could be tested in the subsequent random representative sample. Much of the initial survey was reused with a subsequent random sample. As a result it was possible to compare the results of both surveys for time-shift trends or any noticeable differences.

Evaluation Study Online Survey

The intent of the evaluation study online survey was to gather the attitudes and feelings of a scientifically valid random sample of teachers, students, administrators and parents that could represent the wider population with a degree of certainty. This survey was designed to support or challenge hypotheses identified by other sources (e.g. the first survey, previous official reports, and general perceptions within the Ministry of Education and the wider community) and provide a collective evidence base for wider recommendations. It was not intended to identify issues, challenges or positive aspects of the schooling system in its own capacity. Nor would it be used to establish potential solutions or recommendations to any specific issues it may highlight.

The evaluation was also intended to provide one or more points of the triangulation data analysis process described above in the Purpose and Intent section.

An online survey was selected as an appropriate method to collect these data for the following reasons:

1. To allow a degree of anonymity in the completion of the survey (see Social Desirability Bias in the Challenges section below).
2. To speed up the data collection to meet the analysis timeline.
3. To avoid human based data entry errors.

As a genuinely random and representative sample, the core 150 schools (refer Statistical Sample section) were invited to participate in the survey.

All schools in the core school sample were asked to attend a regional workshop that explained the purpose of the Evaluation Project. This workshop included providing participants with an early indication of the details of the school visits for those involved and details of the online survey, including the URL (Uniform Resource Locator) link and the desired target participant numbers.

Internet connectivity and reliability varies greatly across Oman and generally degrades with distance away from a main centre, or the capital city Muscat. To avoid a bias in participation of only those parents with internet connectivity, the schools were asked to invite parents to carry out the survey at the school. This would also allow the school to ensure a minimum level of parent participation. This also applied to student participation. Schools were asked to make time, computers and connectivity available to students to complete the survey.

For schools that indicated that they had no internet connectivity available at all, paper versions of the survey were prepared to distribute to these schools. No paper versions were finally utilised.

The following table shows the breakdown of the invitees and final respondents.

Table 13.2 Number breakdown of Evaluation Study online survey – Refer Challenges section also.

Participants	Targeted invitees from the core 150 schools	Minimum number required for 5% margin of error with 99% confidence	Actual number of Respondents
Administrators	All Administrators	459	32
Teachers	All Teachers	610	596
Students	50% of Students per school	658	1576
Parents	10 parents per school	663	52

13.2.2 School Visits

A decision was made to physically visit 55 of the core 150 randomly selected schools to conduct face-to-face interviews and make observations of classroom practice and the physical buildings and surrounds. The 55 schools were a subset of the core 150 schools in that they were proportionately representative of the eleven regions, boys, girls and co-ed schools and the school levels and types (refer Statistical Sampling section for details of this representation). The following tables give the structure for each school visit and a list of the numbers and participants involved.

Table 13.3 Structure of School Visits

Period	School Visit Team Member 1	School Visit Team Member 2
	Introductions to Principal and School Leaders	
1	Principal Interview	Parent Council Interview
2	Principal Interview	Classroom Observation 2
3	Classroom Observation 1	Teacher Interview 2
4	Teacher Interview 1	Classroom Observation 3
	Break	Break
5	Senior Teacher Interview	Teacher Interview 3
6	Support Staff Interview	Support Staff Interview
7	Break	Break
8	Building & Facilities check	Senior Teacher Interview

Table 13.4 Intended and actual numbers involved in School visits

Activity per School	Total Intended Numbers	Actual Final Numbers
1 x Principal interview	55	37
2 x Senior teacher interviews	110	68
1 x Building inspection	55	33
3 x Classroom observations	165	90
3 x Follow-on teacher interview	165	111
2 x Support staff interviews	110	72
1 x Parent committee interview	55	36

Interviews

The table above indicates the number and distribution of the interviews conducted during the school visits. The methodology is described here.

Due to time constraints the project opted to use **Computer Assisted Personal Interviewing (CAPI)** to allow the analysis of the data collected to begin to take place almost immediately upon the completion of the interviews.

The questions in the interview fitted into four categories:

1. Specific response required – "How many students classed as special needs to you have in your class?"
2. Boolean – "Do you consider the grades from previous teachers to be accurate?"
3. Multi – select – "What are the barriers to integrating ICT into your subject area? Indicate all that apply."
4. Interpretive categorisation – "What concerns, if any, do you have about the teacher annual appraisal report?" The response categories for this type of question would be:
    a. No concerns.
    b. Minor concerns.
    c. Major concerns.
    d. Fundamental concerns.

As a semi structured interview (refer Appendix 8 Overview of quantitative and qualitative data collection methods) with the exception of category one above, the questions were guided prompts and not necessarily asked as a direct question. It was, therefore, the responsibility of the interviewer to interpret the response into the most valid or appropriate category. The intent of this approach was to identify themes of attitudes and feelings at a high level and look for evidence of systems in action rather than become too focused on the detail of individual responses. This kept the interview quantitative and focused on the system not the symptoms.

The data collected from interviews were not designed to generate conclusions or offer solutions in its own right but to support or challenge hypotheses derived from other sources and through triangulation provide a supportive basis for the higher level recommendations of the final report.

There were five Ministry of Education teams involved in the school visits and interviews. Each team consisted of two Omani officials from the Evaluation Project Technical Committee and one International consultant.

All Evaluation Project interviewers went through two weeks of intensive training as a pre-requisite to conducting the school visits. The main components of the training were:

- Familiarisation of the questions and interview scripts.
- Practice in interpreting responses into categories.
- Ethical principles of interviewing and general data gathering.
- Training and familiarisation of the computer application forms that would be used.
- Practice visit to local schools to test readiness of personnel and technical application.

School Observations

Classroom Observations

Table 3 and Table 4 above show the structure of the school visits including the classroom observations. The intent of the observations was to take a snapshot view of teaching practice and to provide a context for the follow-on interview with the observed teacher. This was a component of the triangulation strategy of having different views of the same picture from different perspectives. In this case, the observers were looking to ascertain whether the behaviour observed in classrooms was complementary to, or in conflict with, what teachers said about their own practice through the online survey and follow-up interviews.

The following table lists the aspects that were being observed.

Table 13.5 Classroom Observations & Response Categories

Observations	Response Categories
Maximises productive learning time	
Engages and challenges students in active learning	
Ensures students know and understand what they have to learn	Minimal
Encourages students to think creatively and critically	Developing
Uses formative assessment strategies related to success criteria	Competent
Ensures positive and supportive classroom	Advanced
Manages student behaviour fairly sensitively and consistently	
Has appropriate classroom displays linked to learning	

Building Checks

Building checks were conducted in 33 of the schools visited. They included a visual observation of the level of suitability, usage and maintenance of the facilities. There were 42 areas in the checklist covering all areas of the school, grounds, class rooms, ablution areas and specific usage areas (e.g. first aid room).

The observers were asked to indicate they had sighted an area and classify it in one of the following categories: a) Unused b) Poorly maintained c) Well maintained but needs item repairs, or d) Well maintained.

In particular, there was an overall judgement made on major building facilities that would have a direct implication for student learning. These areas are listed in the table below.

Table 13.6 Building Check Overall Impressions and Response Categories

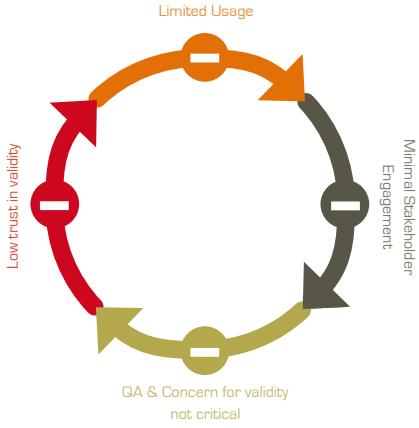
Observations	Response Categories
The school appears well maintained	
Ventilation in rooms is satisfactory	
Painting fresh and attractive	Yes
Classrooms are properly protected from the glare of the sun	Mostly
The students have adequate shade to play under	No
School appears to be a safe environment with no hazards accessible to students	
Grounds are maintained	

e-Portal Data Collection

The Ministry of Education, central office collects data via an e-portal. These data are a combination of core data known about physical and human resource elements of the system and data continuously entered by schools. It would seem that there is limited use of much of the data and, therefore, limited engagement with it by the stakeholders of the data. This lack of engagement means that quality assurance practices and validity checking are not critical and has led to a broad range of quality within the data. This range of quality is evidenced by: *Diagram 1: Simplified Negative Reinforcing Loop*

- Obviously inaccurate data (e.g. schools recording that are only open one day in a semester), and
- Incomplete data (e.g. less than 100% of schools represented in a number of the data categories).

Diagram 13.1 Simplified Negative Reinforcing Loop



Not surprisingly, there is a correspondingly low trust in the validity and reliability of the data. In a Causal Loop Model of the Ministry's data collection, aggregation, analysis and use an obvious 'Negative Reinforcing Loop' has formed (see Diagram 1 above).

The Evaluation Project requested all data in the following category and sub-categories columns and received the following data from the Database section of the IT Directorate of the Ministry of Education, Oman. Where the 'Sample Received' is from the core 150 Schools this constitutes 100% of what was requested.

Table 13.7 Data requested and received from Database section, IT Dept, MOE

Category	Sub-Categories	Sample Received	Comments
Staff demographics	Date of birth, date started teaching, qualifications, job descriptions, school currently employed at, nationality.	All staff in school sector	For year 2012/2013
School demographics of the core 150 Schools	Location (Region, Village), distance from main centre, general building stats including date of build.	Core 150 Schools	
Teaching workload	Lessons per week, students per class.	All teaching staff from 915 Schools	For year 2012/2013
School educational breakdown	Number of classes, grades, teachers, administration and students.	All schools	For year 2012/2013
Teacher absences	Number and reason per school.	873 schools	For year 2012/2013
Student demographics for the core 150 schools	Date of birth, school in attendance, current grade, gender.	All students from the core 150 schools	For year 2012/2013
Student absences	Number per school and grade per semester.	Up to 1,018 schools*	For years 2009/2010, 2010/2011, 2011/2012, 2012/2013
Student achievement for the core 150 Schools	Final marks, pass/fail rates per semester.	All students from the core 150 schools	For years 2010/2011, 2011/2012, 2012/2013
School days open	Number of days marked as having students present per semester.	Up to 1,004 schools*	For years 2011/2012, 2012/2013

* Data entry by schools is increasing every year and so this number indicates the sample of the most recent year.

Ministry of Education & Governorate Interviews

Ministry of Education and Governorate Office staff were interviewed about the processes and procedures they operated within. The Ministry and Governorate interviews, where relevant, formed another perspective in the triangulation process.

The interviews were undertaken within the context of one of the eight aspects of the education system being evaluated (as listed in the Evaluation Project terms of reference) for the purposes of statistical comparative analysis. Many of the questions required the interviewers to interpret the responses into predetermined response categories. However, the interviews were for the most part more qualitative than the school interviews as more effort was made to capture the actual content of the responses through free text fields and note taking by the interviewers. On a number of occasions follow-up visits were made to clarify a position or seek further responses.

The interviews were conducted by a team of up to four Omani Evaluation Project team members and one international consultant. One team member took responsibility to complete the official interview form while the other members made notes.

Table 13.8 Number of Interviewees in the Ministry of Education

Ministry of Education	Number of Interviewees
Central Ministry	54
Dhofar Governorate	3
Al Batinah North Governorate	4
Al Shaqirah North Governorate	3
Muscat Governorate	3

External Stakeholder Organisation Interviews

The graduates (outputs) of the public education system are the inputs into the wider community. The following organisations were consulted as part of the Evaluation Project:

- Oman Chamber of Commence.
- Ministry of Finance.
- Ministry of Civil Services.
- Ministry of Higher Education.
- Ministry of Manpower.
- Sultan Qaboos University.
- Sohar University.
- State Council Education Committee.
- Al Shura Council Education Committee.
- Ministry Of Health.
- Education Council.

Document Review

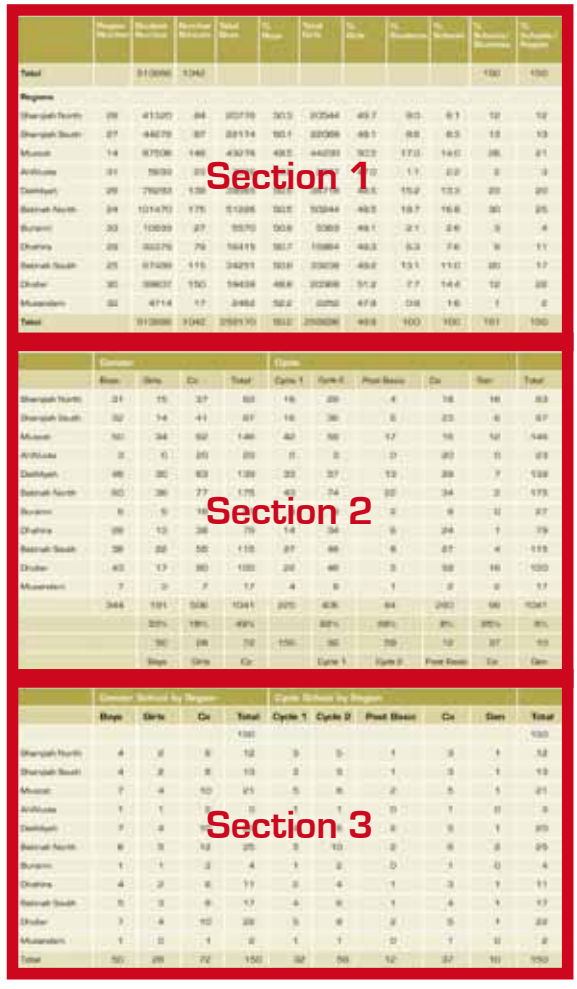
A review of documentation was undertaken that included international statistical and best practice reference documentation, previous evaluative reports on Oman's education system, published Ministry of Education documents, decrees and reports, a wide range of internal Ministry of Education documentation, reports and strategic plans and wider Government strategic plans and decrees. Appendix 9 provides the details of the documents that have been referenced in this report.

13.3 Statistical Sampling of Schools

A representative random sample of 150 schools (14.4% of the total school population) was deemed to be a valid sample for statistical accuracy. The spreadsheet below was generated to breakdown the critical areas of representation required and the proportionate numbers of schools in each representation. The critical areas for representation were:

- Region (eleven regions).
- School by Gender (Boys, Girls, Co-educational).
- School Type and Level (Cycle 1, Cycle 2, General Education and Post Basic).

Diagram 13.2 **Schools Statistical Sampling by section.**



Section one – Regions

Section one shows the number of students and schools per region giving a total number of schools per region that would be required in a representative sample.

Table 13.9 Number schools per region as representative sample

	Region Number	Student Number	Number Schools	Total Boys	% Boys	Total Girls	% Girls	% Students	% Schools	% Schools/ Students	% Schools/ Region
Total		513866	1042							150	150
Regions											
Sharqiah North	28	41320	84	20776	50.3	20544	49.7	8.0	8.1	12	12
Sharqiah South	27	44272	87	22174	50.1	22089	49.1	8.6	8.3	13	13
Muscat	14	87506	146	43276	49.5	44230	50.5	17.0	14.0	26	21
Al-Wusta	31	5693	23	3016	53.0	2677	47.0	1.1	2.2	2	3
Dakhliyah	26	78283	139	39565	50.5	38718	49.5	15.2	13.3	23	20
Batinah North	24	101470	175	51226	50.5	50244	49.5	19.7	16.8	30	25
Buraimi	33	10933	27	5570	50.9	5363	49.1	2.1	2.6	3	4
Dhahira	29	32379	79	16415	50.7	15964	49.3	6.3	7.6	9	11
Batinah South	25	67489	115	34251	50.8	33238	49.2	13.1	11.0	20	17
Dhofar	30	39807	150	19439	48.8	20368	51.2	7.7	14.4	12	22
Musandam	32	4714	17	2462	52.2	2252	47.8	0.9	1.6	1	2
Total		513866	1042	258170	50.2	255696	49.8	100	100	151	150

Section Two – School Gender and Type Percentages

Section two gives the total percentages of schools in each region by gender and type. This in turn provided the percentages of each school type and gender per region for the sample to be representative.

Table 13.10 School Gender and Type Totals

	Gender				Cycle					
	Boys	Girls	Co	Total	Cycle 1	Cycle 2	Post Basic	Co	Gen	Total
Sharqiah North	31	15	37	83	16	29	4	18	16	83
Sharqiah South	32	14	41	87	16	36	6	23	6	87
Muscat	50	34	62	146	42	59	17	16	12	146
Al-Wusta	3	0	20	23	0	3	0	20	0	23
Dakhliyah	46	30	63	139	33	57	13	29	7	139
Batinah North	60	38	77	175	43	74	22	34	2	175
Buraimi	6	5	16	27	8	9	2	8	0	27
Dhahira	28	13	38	79	14	34	6	24	1	79
Batinah South	38	22	55	115	27	49	8	27	4	115
Dhofar	43	17	90	150	22	48	5	59	16	150
Musandam	7	3	7	17	4	8	1	2	2	17
	344	191	506	1041	225	406	84	260	66	1041
		33%	18%	49%		22%	39%	8%	25%	6%
		50	28	72	150	32	59	12	37	10
		Boys	Girls	Co		Cycle 1	Cycle 2	Post Basic	Co	Gen

Section Three – School Gender and Type Actual Numbers

Section three is the transfer of the percentages from the previous diagram into actual numbers of schools in each category for each region.

This calculation provided the appropriate statistical sample in each of the critical representative areas.

The order of priority was region then gender and then type. This meant that the numbers for region and gender needed to be exactly correct, while the numbers for type only needed to be correct overall not specifically exact within each breakdown.

Table 13.11 Actual Numbers School Gender and Type per Region

	Gender School by Region				Cycle School by Region					
	Boys	Girls	Co	Total	Cycle 1	Cycle 2	Post Basic	Co	Gen	Total
				150						150
Sharqiah North	4	2	6	12	3	5	1	3	1	12
Sharqiah South	4	2	6	13	3	5	1	3	1	13
Muscat	7	4	10	21	5	8	2	5	1	21
Al-Wusta	1	1	2	3	1	1	0	1	0	3
Dakhliyah	7	4	10	20	4	8	2	5	1	20
Batinah North	8	5	12	25	5	10	2	6	2	25
Buraimi	1	1	2	4	1	2	0	1	0	4
Dhahira	4	2	6	11	2	4	1	3	1	11
Batinah South	5	3	8	17	4	6	1	4	1	17
Dhofar	7	4	10	22	5	8	2	5	1	22
Musandam	1	0	1	2	1	1	0	1	0	2
Total	50	28	72	150	32	59	12	37	10	150

Random Selection

A spreadsheet was created containing all schools listed only by their four digit ID Number, gender and type. A numbered column was included starting from 1. The list was filtered by region and gender and a random number generating formula created the required total of numbers corresponding to the region and gender combinations as described in the previous sections.

The School IDs listed next to the random numbers generated were then combined to form the Core Random Sample of schools. It was checked to ensure all representations were accurately accounted for and finalised. The School IDS were then re-associated with the complete set of data for the selected schools (e.g. Name of school, address and location).

The 55 schools in the subset to be visited were selected on a "First on the list basis". Going through the list of each region, the first schools that satisfied the remaining representation criteria were selected.

In the final list of schools to be visited, three schools were replaced with other equivalent schools from the random sample for reasons considered legitimate. One had only just been transferred to a new site and two in Al Wasta were deemed to be too far away from the main centre or from accommodation (approx. 400kms) to be suitable for a visiting team.

13.4 Analysis

All quantitative data collected via surveys or interviews was entered directly into databases at the source. That is, the respondent or interviewer filled out electronic forms as a front-end to a Microsoft Access database. Microsoft Access was selected as the database tool as all of the Evaluation Project Omani team members already had this pre-installed on their laptops.

All data received from the Database section of the IT Department was received as a raw export from their database in Microsoft Excel format.

Some historical statistical data was received in printed form or as a PDF file and was scanned or re-entered into spread sheets in Microsoft Excel.

Analysis was carried out by using pivot tables in Excel, Queries and reports in Microsoft Access and specific data management and business intelligence software called Tableau.

Tableau allows for complex chart building and analysis to be undertaken from multiple data sources. In this way the project could analyse survey responses in Access database format overlaid with general statistical data in Excel without having to convert all data to a common format and risk contamination or human handling errors.

The resultant charts are used to inform the writing of the report and many are included throughout the report.

13.5 Challenges

There are many challenges that arise during a project such as this. This section will not deal with all of them as many are simply issues of project management that require a risk management strategy.

The challenges identified here are those that have a significant potential or actual influence on either the data gathering process, the data itself, or both. They are of a magnitude that the analysis of the data must take them into consideration and identify the impact they have made on the data collection process.

Social Desirability Bias

Social desirability bias is the tendency of respondents to answer questions in a manner that will be viewed favourably by others. It can take the form of over-reporting "good behaviour" or under-reporting behaviour that is perceived by the respondent as "bad" or undesirable. The tendency poses a serious problem with conducting research with self-reports, especially questionnaires. This bias interferes with the interpretation of average tendencies as well as individual differences.

This is particularly observable in compliant or highly respectful societies where the respondent is either fearful of stating what they honestly think or believe or do not wish to offend or upset anybody by have a potentially contradictory viewpoint. It is often viewed by many to be disrespectful or un-patriotic to question the status quo, authorities or people in authority.

To counteract this bias all surveys and interviews used in this Evaluation Project employed a Likert scale. This scale contains an even number of responses (e.g. 1 to 4 scale) to avoid a 'safe' middle ground option. In addition, any responses that were worded to allow a middle ground option were removed.

It was assumed that there would be a reasonably high degree of social desirability bias in the surveys conducted both online and face-to-face. It was decided that this would simply be taken into consideration when the data were analysed. It was also determined that social desirability bias would highlight any responses at the extreme ends of the scale. That is, any respondent indicating "Strongly Agree", or "Strongly Disagree" would have to feel sufficiently so as to overcome their usual sense of loyalty, politeness or fear. This was dependent on the nature of the question and was not applied as a general rule across all responses.

Industrial Action

During the second week of the school visits, a teachers' strike occurred. It did not involve all schools and affected different schools in different ways. Some were entirely unaffected, others refused all outside contact, and others sent students home while staff remained. A decision to cease the school visits was made by the Ministry of Education before the third week of school visits started. There was no way of knowing to what extent, if any, continuing data collection would be compromised by the on-going industrial action. While in the best case scenario, that the data was entirely uncompromised, the Evaluation Project could still not categorically defend the argument that the data would be compromised as a result of continuing to collect it in an environment of industrial action in the school sector.

This situation shows in the final school visit and online survey numbers, Tables 2 and 4. Where there is a discrepancy in the classroom observation final numbers, is where a school was visited but that school had sent their students home. In these cases interviews were conducted but there were no classes to observe.

Incomplete Centralised Data Aggregation

The data received from the Database section of the IT Department was often incomplete as Table 7 above shows. There is a total of 1042 schools, so some data were missing from up to 172 schools.

The Ministry does not collect data on the number of days that schools are officially open, so this information was calculated from the days that the system registered that schools entered at least one student to be present. Upon consideration this was determined to be a reasonably accurate way of determining that the school was officially open on that day.

However, there were a significant number (approx. 15%) of schools who registered less than 40 days per semester as having students present with numbers as low as one day per semester. It was assumed that numbers less than 40 were data entry error, or neglect, and not a reflection on the actual days a school was open. There was no way of accurately determining where the actual demarcation was between data error and actual schools that were not open very often. The maximum for the semester was registered at 98 so it was considered that less than 40 was almost certainly error. Schools with less than 40 opening days were, therefore, excluded from analysis.

While the analysis for incomplete data or data with inconsistencies excluded was based around averages, the study had no way of establishing if the correct numbers or a complete set of schools represented would have significantly altered the final estimations.

CHAPTER 14

INTERNATIONAL LITERATURE REVIEW OF APPROACHES TO SCHOOL EVALUATION

The Evaluation of the G 1-12 Education System Project is a response to demands for higher quality education in Oman. Consistent with such demands globally, there is a focus on school improvement and accountability processes. Because much of the global response to these demands has included the development of comprehensive school evaluation systems, the Consortium undertook both a desk study of national approaches to school evaluation and the development and piloting of a school evaluation framework for the Omani Grade 1-12 school system.

These activities were an important contributor to the wider Evaluation Project – particularly in the development of an evaluative approach appropriate to the context of Oman and the development of evaluation capacity among the Omani team members. This chapter reports on key findings from the desk study literature review.

The main conclusion that can be drawn from the review is that most education systems have moved or are moving towards a combination of *self/internal evaluation* and *external evaluation/validation*, both of which have their specific functions and are necessary elements for an effective system of school evaluation. This report focuses on these two key elements and the ways in which they should support and complement each other. Further conclusions are the importance of developing a shared understanding of the purposes of school evaluation among core stakeholders, and the capacity and capability of those charged with the implementation of school evaluation processes.

Summary of Key Findings

1. The current global emphasis on comprehensive school evaluation systems is a response to demands for higher quality education including school improvement and accountability.
2. It is important to ensure a shared understanding among stakeholders that improving student outcomes is the ultimate objective of school evaluation, thus teaching and learning processes should be central to development of an evaluation framework.
3. There is a need to convey a constructive and widely shared view of the purposes of school evaluation: as far as possible include all key stakeholder groups in the design of school evaluation structures and processes.
4. Approaches to, and expectations of, school evaluation vary across education systems given different educational histories, administrative systems, policy priorities etc. The degree of decentralisation/school autonomy is central to how these approaches and expectations are constructed.
5. As a result of extensive debate within and between countries, most education systems have moved or are moving towards a combination of self-evaluation/internal regulation and external evaluation/validation.
6. An external school evaluation mechanism is increasingly seen as necessary to enable comparable evaluative information on school quality, to ensure the validity of school self-evaluation, and provide a means of sharing good practice across the system.
7. Difficulties in getting the appropriate balance between accountability and school/system improvement are common. Attempts to strengthen the accountability function of school evaluation must not hinder the improvement function.
8. Separate but clearly linked processes for external and internal evaluation are more effective than attempts to use the same process for both. Connection between the formative and summative aspects of school evaluation is frequently inadequate.

9. School self-evaluations are often undertaken annually and external validation processes usually every three years. Particularly in OECD countries, there are increasing moves towards differentiated timing (1-5 years) for external evaluation of individual schools, based on their performance. In some 'developing' systems in the early stages of school evaluation, external validation for all schools is annual.
10. A crucial element in the effectiveness of school evaluation is that each aspect feeds into the other. External processes should build on internal evaluation findings, and clear procedures for following up/supporting schools in addressing external evaluation findings will enhance their impact on school improvement, and improve accountability. 'Middle tier' arrangements can enable effective collaboration between schools.
11. School evaluation effectiveness is dependent to a large extent upon ensuring that those being evaluated perceive evaluators (internal and external), and those who use the results of the evaluations, to possess the necessary knowledge and skills. School evaluation can reinforce poor performance if the evaluations have a lower level of competence than the evaluated.
12. A strong school evaluation system requires high capability at the national level. An important priority is building analytical capacity in the development and use of information extracted from evaluation data.
13. The development of effective evaluation procedures requires intensive capacity building/training in technical evaluation skills at a number of levels (national and regional offices, 'middle tier', school level).
14. The importance of sufficient time and human/material resource allocation for the implementation of school evaluation reforms, and their alignment with other education reforms underway, must be recognised.
15. There is growing recognition of the importance of taking into account national/local cultures and contexts when developing/implementing school evaluation systems for non-western and/or 'developing' education systems.

Introduction

This report reviews national approaches to **school evaluation**. School evaluation has a long history but until relatively recently the evaluation of quality in school systems tended to be limited to the evaluation of students. As public demand for educational accountability and improvement has intensified the need to verify that school objectives are being met and resources used efficiently has led to the emergence of more systematic approaches to the evaluation of the school as a whole[1].

In general, school evaluation includes **internal evaluation** and **external evaluation,** described by Yeung (2011) as 'two sides of a coin'[2]; both have their specific functions and are necessary elements for an effective system of school evaluation[3].

This review focuses on these two key elements and the ways in which they can and should support and complement each other. A wide range of country experiences, as documented in both the research and technical 'education for development' literatures, is drawn on. Although most of the documents reviewed pertain to OECD countries, others refer to the Middle East and North Africa (MENA) and/or Gulf Corporation Countries (GCC).

Key issues for analysis are organised under the following main section headings:

- Designing a School Evaluation Framework
- Procedures for Effective School Evaluation
- The Results of School Evaluation
- Implementing School Evaluation: Challenges and Options
- Cultural and Contextual Issues in School Evaluation

1 V Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. OECD Education Working Paper No. 42 " in *OECD Education Working Paper Series* (Paris: OECD Directorate for Education, 2009).

2 S Y S Yeung, "A School Evaluation Policy with a Dual Character: Evaluating the School Evaluation Policy in Hong Kong from the Perspective of Curriculum Leaders," *Educational Management Administration & Leadership* 40, no. 1 (2011): p.3.

3 J MacBeath and A McGlynn, "Self-evaluation: What's in it for Schools?," (London: Routledge/Falmer, 2002); D Nevo, "School evaluation: internal or external? ," *Studies in Educational Evaluation* 27(2001).

14.1 Designing a School Evaluation Framework

Purposes of School Evaluation

School evaluation systems share a common goal of high quality schooling through improved teaching and learning[4]. Assessing the comparative effectiveness of approaches to school evaluation is challenging, since school systems differ across countries in a wide number of dimensions. Wide diversity exists in the role and function of school self-evaluation as well as in the ways external evaluation of schools is approached. The form of school evaluation implemented within a country – its scope and methods, criteria and standards used, and data gathering instruments – are influenced by the local context and traditions, including the type of administration systems and educational policies, and levels of school autonomy and decentralization policies. An evaluation framework requires schools and/or evaluators to examine the design, delivery and output of education in light of the processes and results involved. It should focus on how both the system-wide leadership and that of individual schools leads people and manages the system to produce the desired results. It is also important that both system and school levels are explicit about the extent to which the desired results have been, or are being, achieved.

Although schools in some countries experience mainly external inspection (for instance, England, Singapore and India), schools in other countries (for example, the Netherlands and Scotland)[5] adopt more liberal forms of internal self-evaluation. In general school evaluation serves two interlinked purposes: **accountability** and **improvement**[6].

Accountability through external evaluation is described by some authors as a controlling process that judges a school's effectiveness. Conversely, internal evaluation through a school's self-review functions as a developmental process that facilitates school improvement[7]. Also noted is that the rationale behind these two traditions of school evaluation is quite different. In short, school effectiveness is **summative** in that it focuses specifically upon the outcomes of schooling and the characteristics of schools that make them effective. School improvement is concerned mainly with the processes of schooling and the ways in which the quality of schooling can be enhanced; thus it is **formative**[8].

4 R Rinne, J Kivirauma, and H Simola, "Shoots of revisionist 1 education policy or just slow readjustment? The Finnish case of educational reconstruction," *Journal of Education Policy* 17, no. 6 (2002).

5 F Janssens and G van Amelsvoort, "School self-evaluations and school inspections in Europe: An exploratory study," *Studies in Educational Evaluation* 34(2008).

6 J. C Hill, *Curriculum Evaluation for School Improvement* (Springfield, IL: C.C. Thomas, 1986).

7 Yeung, "A School Evaluation Policy with a Dual Character: Evaluating the School Evaluation Policy in Hong Kong from the Perspective of Curriculum Leaders."

8 A Harris and N Bennett, *School Effectiveness and School Improvement: Alternative Perspectives* (London: Continuum, 2001).

Despite these differences in interpretation of the purposes and scope of school evaluation, most writers are agreed that the most important issue in developing an effective school evaluation system is achieving a balance between the separate but related aspects of improvement and accountability. Associated with this is the need for the over-riding purpose of improved teaching and learning to be centred firmly in the procedures and outcomes, and for a widely shared understanding of why and how this should be done.

Accountability

Accountability is not so much a mechanism, but a principle that serves a purpose for a society. Hence, educational accountability inevitably raises questions about who should have a stake in the educational process[9]. As a consequence, there are various approaches or models for establishing accountability[10].

Accountability aims at providing information to policy makers and the public about value for money, compliance with standards, and regulation and quality of the services provided. School evaluation for accountability purposes generally implies the use of summative approaches. Various levels of accountability may co-exist vertically or horizontally. External evaluation plays a major role in a traditional type of vertical (hierarchical) external accountability, in which schools provide information to the relevant public authorities (local or national). Such external evaluation is present in most countries. Horizontal accountability also exists, in which schools provide their community and stakeholders with insight into their processes, choices and results. This type of approach has emerged more recently alongside the development of internal evaluation processes.

There is limited research into the effects of school inspection and how it may facilitate school improvement[11]. Research carried out by Booz & Company's Middle East Think Tank into education in the GCC pointed out that successful education reform is characterized by ensuring that, at all levels of education, accountability is paramount in enabling funding to be channelled efficiently[12].

Policy-makers often prefer accountability-focused evaluations which utilize measurement of result indicators through summative assessment as levers of change to assist with decision-making, resource allocation or school improvement. These kinds of evaluation, however, can create attitudes of apathy and failure, and inhibit cooperation in favour of competition. Furthermore, they are not useful for the achievement of developmental goals[13].

9 Yeung, "A School Evaluation Policy with a Dual Character: Evaluating the School Evaluation Policy in Hong Kong from the Perspective of Curriculum Leaders."

10 Janssens and van Amelsvoort, "School self-evaluations and school inspections in Europe: An exploratory study."; J.A O'Day, "Complexity, accountability, and school improvement.," *Harvard Educational Review* 72, no. 3 (2002); Yeung, "A School Evaluation Policy with a Dual Character: Evaluating the School Evaluation Policy in Hong Kong from the Perspective of Curriculum Leaders."

11 M. C. M. Ehren and A. J. Visscher, "The Relationships between School Inspections, School Characteristics and School Improvement," *British Journal of Educational Studies* 56, no. 2 (2008).

12 Booz & Co, "How to Succeed at Education Reform: The Case for Saudi Arabia and the Greater GCC Region", Booz & Company's Middle East Think Tank, http://www.booz.com/me/home/what_we_think/40007409/40007869/40650797?pg=all.

13 E Rebolloso, B Fernandez-Ramirez, and P Canton, "The Influence of Evaluation on Changing Management Systems in Educational Institutions," *Evaluation* 11, no. 4 (2005).

Improvement

School improvement relates to access to education (equity) and education performance (quality and efficiency). School evaluation for improvement aims at closing achievement gaps between low-performing and high performing schools, as well as to enhance the performance of all students. School evaluation for improvement purposes generally implies a formative approach. Definitions and perspectives regarding the purpose and the focus of school improvement can vary according to different stakeholders[14]. The need to clarify the purpose of school evaluation and how it relates to student learning objectives is essential. Its central objective is to improve student outcomes through improved school practices and enhanced school performance.

Recommendations for school improvement are generally drawn from what a system's Inspectorate perceives to be a good school, the decisions school senior leaders need to take and why, learning and making things better via monitoring, evaluating and reviewing. Of particular importance is the quality assurance role of managers and senior leaders if schools are going to implement and sustain further progress[15].

Although the predominant purpose of external evaluations conducted by inspectors is accountability, there is a tension in the inspection process. On one hand it is aimed at assuring accountability. On the other hand, so far as inspectors provide feedback to schools about their strengths and weaknesses, inspections are also a vehicle for schools to develop and improve[16]. Ideally then, the purpose is to develop an integrative model that brings together ideas about how school self-evaluation, with its key purpose of school improvement, can be supported and validated through external evaluation[17]. For example, the United Kingdom's approach, characterised by a focus on the institutional quality of the school as a whole, is reflected in the Ofsted (2003:10) framework for inspecting schools which stated that 'Self-evaluation makes an important contribution to inspections'. The purpose of a more integrative model, it is maintained here, could be seen differently: so that inspection makes an important contribution to school self-evaluation[18].

14 Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. OECD Education Working Paper No. 42 ".

15 Lorraine Thomas, "Book Review: Good teachers, good schools: how to create a successful school," *Professional Development in Education* 35, no. 2 (2009).

16 D Plowright, "Self-evaluation and Ofsted Inspection," 35, no. 3 (2007).

17 Ibid.

18 Ibid.

School Evaluation Approaches

The majority of evaluation approaches are concerned with both processes and outcomes and generally cover all school activities. As indicated above, school evaluation approaches can take the form of external evaluation (validation) and/or internal self-evaluation (self appraisal). Also indicated is that a 'middle-tier'[19] is often involved. Country examples are drawn on to illustrate key points in the following discussion.

External Validation

Ideally external evaluation provides an independent judgment of the educational performance of a school and validates the school's capability in self-appraisal. External evaluation is typically concerned with both processes and outcomes. In Poland for example, the regional inspectorate (kuratorium) examines process as compliance with national legislation in areas such as the curriculum, teachers' qualifications and student assessment. Regarding outcomes, it evaluates the performance of pupils and checks whether regional educational objectives and the aims of the school are achieved[20].

In the Netherlands, the Dutch Supervision Act of 2002 states that 'through inspection the government guarantees that schools will deliver a satisfactory level of educational quality for all citizens', and that 'through inspection, the government stimulates schools to develop their own quality assurance systems, which will lead to improvement in the quality of education'[21]. It makes implicit assumptions about how school inspections promote school improvement (i.e. actions which schools should take in order to improve the achievement levels of their students) and quality assessment includes aspects of the teaching-learning process, the school results, and the school environment[22].

The majority of external evaluation approaches rely on the results obtained by pupils in national tests and examinations as a means to evaluate the performance of individual schools. National and international assessments are also used to measure the extent to which students achieve national standards. In most countries, school evaluation focuses to some extent either on the levels of student performance or on gains in student performance.

In Hungary and the United States, for example, evaluation is focused on pupil attainment in national tests. Assessed outcomes may relate to the levels of performance attained by schools as well as the equity of results within the school – including the integration of children with special educational needs, the social mix, equality of opportunity for disadvantaged pupils, and the integration of immigrant children[23]. Thus, school evaluation may focus on whether schools meet equity targets.

For countries, such as Canada, Spain, and Germany, in which an approach to evaluation is decentralised to the local authorities, the content of external evaluation is determined by the local authority. In Spain, for instance, the Autonomous Communities are responsible for defining school evaluation plans[24]. In Finland there are no national regulations for the evaluation of individual schools. Education providers (the municipalities) are responsible for evaluating education and determining the approach to local evaluation.

19 R Smith et al., "Enabling school-driven system leadership. Rapid Review," (Slough, UK: National Foundation for Educational Research (NFER), 2012).

20 Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. OECD Education Working Paper No. 42 ".

21 cited in Ehren and Visscher, "The Relationships between School Inspections, School Characteristics and School Improvement," p.205.

22 Ibid.

23 S Field, M Kuczera, and B Pont, "No more Failures: Ten Steps to Equity in Education, Education and training policy," (Paris: OECD, 2007).

24 Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. xOECD Education Working Paper No. 42 ".

Within other countries where there are high levels of autonomy, such as the Netherlands and New Zealand, schools are required to carry out school self-evaluations, with external evaluation taking the form of an inspectorate, or external review panels, to inspect schools' approaches to, and development of evaluation[25].

The School Excellence Model developed in Singapore requires all schools to be validated externally once every five years by the Ministry's School Appraisal Branch. The School Excellence Model validation teams look at areas related to:

- School leadership – how the school addresses student learning and performance excellence.
- Strategic planning – how the school sets clear stakeholder-focused directions, develops action plans to support its directions, deploys the plans and tracks performance.
- Staff management – how the school develops and utilises the full potential of its staff in relation to professional development and staff moral.
- Resource management – how effectively the school manages its internal resources and its external partnerships to support its strategic planning and the operational processes.
- Key performance results – the extent to which the school is able to achieve the desired outcomes of education and in particular the holistic development of its students.
- Partnerships – what the school is achieving in relation to its partners and the community at large[26].

Standardisation of the criteria for external school evaluation in the context of school autonomy is becoming increasingly common. There is a current trend in most OECD countries to base external evaluation on objective considerations by providing evaluators with lists of criteria set by the central education authorities. When predetermined lists of criteria are established for external evaluation, they are either defined by chief inspectors (as in Portugal) or by departments within Ministries (as in Iceland).

For many countries, aspects such as teaching and learning processes, or guidance and support for pupils, are part of the evaluation frameworks determined at the national level. The classroom practice of teachers is evaluated in accordance with parameters that relate to the content of their lessons, teaching methods and use of resources, the quality of their interaction with students, respect for their personalities and the development of their self-confidence, as well as the treatment of students with special needs. Relations with parents, other schools, local institutions or the local community in general may also be considered. In a minority of countries, such as England or Wales, the improvements carried out since the previous inspection are also evaluated.

Most countries' external evaluation processes include quantitative indicators relating to the academic performance of pupils (results in tests and examinations), their rate of absenteeism, the drop-out rate, and the success rate in progressing from one year to the next, or the proportion of pupils who qualify for special education. Qualitative outcome parameters tend to be associated with the cognitive development of pupils or their social behaviour. Students' skills are evaluated qualitatively as outcomes of educational activity in the Flemish Community of Belgium, in Slovakia and in the Czech Republic, usually by observing pupils directly in the classroom. The social skills of pupils are evaluated as an outcome of education by observing their attitudes, their involvement in extra-curricular activities, or their relationships.

25 J Scheerens, G van Amelsvoort, and C Donoughue, "Aspects of the organizational and political context of school evaluation in four European countries " *Studies in Educational Evaluation* 25(1999).

26 K-H Mok, "Decentralization and marketization of education in Singapore: A case study of the school excellence model " *Journal of Educational Administration* 41, no. 4 (2003).

In Scotland, the inspectors evaluate schools by means of a composite performance indicator that includes the performance of pupils in national examinations, the quality of their learning, and the progress they achieve[27].

An area in which there are marked differences between countries is that of follow-up after school inspection. The lack of follow-up by external authorities on the implementation of recommendations within the evaluation reports encourages the perception that external evaluation is only an exercise in compliance. Another post inspection issue is the legal consequences for a school either failing to comply with regulations, or performing at an unsatisfactory level according to the school inspectorate. In the Netherlands, when a school is deemed to be underperforming significantly, the Inspectorate is able to take action only if the school does not comply with the legal regulations[28].

Inevitably, different schools will report different experiences of the external inspection process. One explanation for these differences is identified as the school's organisational culture. Schools with collaborative cultures that value learning, are responsive to new ideas, welcome challenges and are used to critical self-reflection, are seen as more likely to take the inspection process postively. For such a school self-evaluation would be a regular occurrence and external validation welcomed as recounted by a school leader in England: 'Ofsted [provides] an external review that is validating the things that we have decided ourselves.' [29]

Some serious problems with external evaluation processes have been detected in some schools. Sloan (2007) summarizes some negative impacts of external evaluation on teachers, curriculum and instruction. These negatives include increasing anxiety and stress, resulting in teachers leaving the teaching profession, forcing teachers to deliver inferior instruction, etc[30]. Alternatively Yeung (2011) reports that external evaluation had little impact in improving teachers' instructional approaches and that teachers can hold uncertain attitudes and views toward the influence of external evaluation. In his study only 50 percent of teachers agreed that external inspection led to changes in classroom practice, and 51 percent of them thought that the external reviewers did not perceive a realistic picture of their teaching[31].

When the main concern of school evaluation is compliance the result is reported to be an inadequate focus on teaching and learning, thus missing the opportunity to contribute to school improvement. Furthermore, the need for school's to 'jump through Inspectorate hoops' may also mean the real problems that a school faces are covered up[32].

Other recent research has shown that external evaluation has little effect on student performance but can have a negative impact on teachers[33]. Exacerbating teachers' attitudes of distrust, perceptions of political control, fear of being evaluated and demotivation can result in the opportunity to bring about significant change being lost[34].

27 Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. OECD Education Working Paper No. 42 ".

28 Ehren and Visscher, "The Relationships between School Inspections, School Characteristics and School Improvement."

29 cited in Plowright, "Self-evaluation and Ofsted Inspection," 138.

30 K Sloan, *Holding Schools Accountable. A Handbook for Educators and Parents* (Westport, CT: Praeger, 2007).

31 Yeung, "A School Evaluation Policy with a Dual Character: Evaluating the School Evaluation Policy in Hong Kong from the Perspective of Curriculum Leaders."

32 P Santiago, "OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes: the Main Conclusions," in *"Facing 21st Century Challenges in Education." The Standing International Conference of Inspectorates, SICI* (Prague2012).

33 C Hall and A Noyes, "New regimes of truth: the impact of performative school self evaluation systems on teachers' professional identities *"Teaching and Teacher Education* : 25(2009); I R Luginbuh, D Webbink, and I de Wolf, "Do inspections improve primary school performance? ," *Educational Evaluation and Policy Analysis* 31, no. 3 (2009).

34 Rebolloso, Fernandez-Ramirez, and Canton, "The Influence of Evaluation on Changing Management Systems in Educational Institutions."

Developing a climate of trust between the inspectors and school personnel is essential. A growing number of educators stress the importance of maintaining a complementary and integrated relationship, or a critical friendship, between internal and external evaluation procedures[35].

Internal Self-evaluation

Increasingly external evaluation agencies such as Ofsted, the Inspectorate in England, propose that a school's self-evaluation should play a more prominent role by ensuring that inspection complements school development planning and self-appraisal. 'Self-evaluation provides the key to improvement'; how good is the school; what are its strengths and weaknesses; what must it do to improve?[36] A school's self-evaluation for 'effective school improvement' should be prominent in ensuring that external inspection complements school development planning and self-appraisal[37].

Four self-evaluation domains have been identified[38]:

- evaluation of outcomes: relating to academic achievement, personal and social development, and students' destination after leaving school;
- evaluation of processes at the classroom level: relating to the quality of learning and teaching;
- evaluation of processes at the school level: relating to the school as a learning, social and professional place; and
- evaluation of the school environment: focused on the relations between the school and the parents, as well as links between the school and the local community.

As education decentralization is increasing around the world so too is recognition of the importance of school-initiated self-evaluation to collect systematic information regularly about the functioning of the school. Analysis of this information gives insight into the quality of the school's education and highlights areas where change could occur[39].

In Singapore 'self-assessment and analysis' is central to the School Excellence Model (SEM) as an organizing tool to promote school excellence[40]. Moving from an external inspection to an internal appraisal exercise, individual schools are given more flexibility and autonomy to decide and chart their own development plans. The self-assessment approach requires schools to be self-questioning and self-initiates in reviewing their current practices and to look at their results and outcomes beyond academic performance.

In the self-assessment process, the close involvement of staff members in reviewing the school's strengths and weaknesses promotes ownership of the school's improvement and vision. The SEM also allows schools to determine their status of growth and, based on the assessment's findings, prioritize the areas for improvement and draw up action plans. Schools can focus their resources, integrate improvement strategies into the normal school operations and monitor the progress of plans[41].

35 Yeung, "A School Evaluation Policy with a Dual Character: Evaluating the School Evaluation Policy in Hong Kong from the Perspective of Curriculum Leaders."; J Vanhoof and P Van Petegem, "Matching internal and external evaluation in an era of accountability and school development: lessons from a Flemish perspective101–119," *Studies in Educational Evaluation* 33, no. 2 (2007).

36 Ofted, 1999:138 cited in Plowright, "Self-evaluation and Ofsted Inspection."

37 Ibid.

38 J McBeath and K Myers, *Self-evaluation: What's in it for schools?* (London Routledge/ Falmer, 2002).

39 G Devos and J C Verhoeven, "School Self-Evaluation—Conditions and Caveats: The Case of Secondary Schools," *Educational Management Administration & Leadership* 31, no. 4 (2003).

40 Mok, "Decentralization and marketization of education in Singapore: A case study of the school excellence model ".

41 Ibid.

Internal evaluations may focus on processes, outcomes or both. Such evaluation is usually concerned with both educational and administrative tasks. Aspects evaluated typically include the obligation to take account of the performance of pupils and of the relationship between the school with the school community or parents[42]. Self-evaluation activities that draw on the monitoring role of the heads of department (at secondary level) are generally under-utilised but can make important contributions to curriculum review and potentially, therefore, to mobilising and sustaining school improvement[43].

Some countries emphasise the importance of results by encouraging schools to use performance indicators (e.g. France, Portugal, Iceland and the United Kingdom). In England schools are also expected to analyse pupil performance using benchmarks and performance indicators. Schools are expected to set specific targets for pupil performance, evaluate the quality of teaching against national criteria, to plan objectives for improvement, and evaluate their effectiveness[44].

From Oman, Al Balushi and Griffiths (2013) report that the Ministry of Education, drawing on the recommendations of an Ofsted report, developed its own school self-evaluation system which has operated in all schools since 2011. Focused on classroom practice and improved student learning, the Omani school self-evaluation system aims 'to develop capacity within schools to enable them to be self-critical, to be able to identify their strengths and weaknesses and to take responsibility for their own development'[45]. Although the system as it was developed included complementary external evaluation processes, it is understood the development of this aspect of school evaluation has been limited.

Current research suggests that internal or self-evaluation has many positive effects on school development, including an improved evaluation understanding among teachers and the involvement of more stakeholders in school evaluation, thus promoting organisational learning[46]. Some researchers consider internal evaluation to have a weakness in its limited credibility[47]. Because self-evaluation is more a tool for managing development, self-evaluation activities are not best placed to serve accountability. An over reliance on self-evaluation may mean that quality challenges in schools are not addressed adequately.

External validation processes can ensure the consistency of both external and internal evaluation processes and, importantly, based on the information and knowledge from schools' reviews, the validating body can assist schools in accordance with their specific needs.

42 Eurydice, "Evaluation of Schools providing Compulsory Education in Europe," (Eurydice; Directorate-General for Education and Culture, EC, 2004).

43 Plowright, "Self-evaluation and Ofsted Inspection."

44 Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. OECD Education Working Paper No. 42 ".

45 S Al Balushi and D Griffiths, "The School Education System in the Sultanate of Oman " in *Education in the Broader Middle East: borrowing a baroque arsenal*, ed. G Donn and Y Al Manthri (United Kingdom Symposium Books, 2013), 122.

46 B Thornton, T Shepperson, and S Canavero, "A systems approach to school improvement: programme evaluation and organizational learning," *Education* 128, no. 1 (2007); S Bubb and P Earley, "From self-evaluation to school improvement. ," *Education Journal* 113, no. 12-13 (2008); R.H Hofman, N.J Dijkstra, and W.H Adriaan Hofman, "School self-evaluation and student achievement. School Effectiveness & School Improvement 20(1): 47–68. ," *20* 1(2009).

47 Nevo, "School evaluation: internal or external? ."

Combined Internal and External Evaluation

In recent years debates about effective school evaluation have led many systems to move towards a combined internal/external approach.

Where external evaluation is used as a process of validating a school's self-evaluation the purpose is to introduce an external perspective to a school's appraisal. It is argued that by undergoing external validation schools can realise the following benefits:

- The validation process enables schools to sharpen the focus of their internal self-assessment procedures and calibration processes.
- The feedback report provides an external view of the strengths that schools could build upon and possible improvements in the provision of better quality education.
- The preparation for the process will give the staff a clear and tangible objective to work towards. Good teamwork can be fostered.
- The site-visit will heighten staff awareness of the importance of involvement and commitment to excellence.
- The process also raises staff's pride in themselves, their work and their school and lead to improved overall performance[48].

Nevo (1995) proposes a school-based evaluation combining formative (planning, improvement) and summative (accreditation, accountability) strategies, making staff responsible for internal self-evaluation, with the evaluator assuming the role of advisor[49].

According to Yeung's (2011) research, schools in Hong Kong are implementing a combination of internal and external modes of evaluation. School Self-Evaluation (SSE) functions as the school's internal evaluation process while External School Review (ESR) functions as the external evaluation through which officials scrutinise school effectiveness. The ESR sequentially follows SSE, and Hong Kong curriculum leaders confirmed SSE is a mandated process that represents a verification phase within a quality assurance system. The SSE and ESR thus act as a quality control mechanism which guarantees 'standards' and 'benchmarks' are met by schools in Hong Kong and, as a process, helps to monitor and govern schools to ensure their public accountability[50].

In the drive to improve educational quality, unnecessary tension can develop between the inspection process and the practice of school self-evaluation. All stakeholders would benefit from a more coherent and integrated system that values both processes[51].

48 Mok, "Decentralization and marketization of education in Singapore: A case study of the school excellence model ".

49 D Nevo, *School-Based Evaluation: A Dialogue for School Improvement*. (Oxford: Pergamon, 1995).

50 Yeung, "A School Evaluation Policy with a Dual Character: Evaluating the School Evaluation Policy in Hong Kong from the Perspective of Curriculum Leaders."

51 Plowright, "Self-evaluation and Ofsted Inspection."

14.2 Procedures for Effective School Evaluation

Setting Educational Standards

Standards depict the desirable or acceptable levels of learning or performance that indicate whether or not the performance of a school is good enough. Performance standards define achievement on a proficiency scale, while educational standards define educational goals for specified grade levels and provide assessment standards against which external evaluation proceeds.

Education authorities generally prepare instructions and recommendations regarding a set of parameters upon which schools are expected to define their criteria for the self-evaluation. Typically schools have some leeway when it comes to defining criteria. In those countries where internal evaluation is taken into account in the course of external evaluation, the criteria tend to be determined partly by the education authorities in order to make comparisons easier.

Internal evaluation should usually relate to a school's own aims and objectives as set out in its educational plan. In most countries the general objective of the internal evaluation is to report goal attainment and measures planned for increasing goal attainment, with school staff usually playing an active part in defining the criteria and carrying out the appraisal. Self-evaluation is therefore strongly connected to the school development programme.

In some countries schools are expected to rely on the standards and criteria defined by external evaluators when they carry out internal evaluation. The Netherlands, the United Kingdom and Slovakia, for example, have centrally determined lists of criteria for external evaluation and recommend that schools use them in their internal evaluation. This is consistent with the fact that, in these countries, external evaluation relies partly on the judgment formed during internal evaluation.

Difficulties may stem from poor alignment of standards, curriculum and assessment, as well as misalignment of views on the role and purpose of evaluation. Well-aligned systems enable evaluators to draw valid conclusions about student performance[52]. A well-aligned system implies comprehensive and clearly defined standards for student performance. If standards are poorly designed, teachers are more likely to focus on tests, thus narrowing the focus of teaching[53].

52 B. M Stecher, "Consequences of Large-Scale, High-Stakes Testing on School and Classroom Practices," in *Making Sense of Test-Based Accountability in Education*, ed. L. Hamilton, B. Stecher, and S. Klein (Santa Monica, CA: RAND, 2002)." in <style face="italic">Making Sense of Test-Based Accountability in Education</style>, ed. L. Hamilton, B. Stecher, and S. Klein (Santa Monica, CA: RAND, 2002

53 J Looney, "Assessment and innovation in education. OECD Education Working Paper No. 24," (Paris: OECD, 2009).

In many of the countries in which the central educational authorities are responsible for evaluating schools, the criteria used for the evaluation of schools have been subject to standardisation. This trend towards standardisation seems to equate to reinforcement of school accountability and increased professionalization of the evaluation service[54]. Paralleling the movement toward developing curriculum standards for students, standards for schools have also been developed for the purpose of school evaluation. This applies to Denmark, Belgium, Hungary, Canada and the United States.

Evaluation Instruments

The observation of lessons is typical in external evaluation systems based on Inspectorates. While the method of observation is generally not formalized, inspectors usually observe a reasonably large sample of teachers and employ standardised observation lists. After observing the work of teachers, external evaluators generally provide them with personalised feedback. Individual teacher evaluation is seldom integrated into the evaluation of schools as entities. Whether and how individual teacher appraisal should be integrated into the evaluation of schools as entities remains debatable[55].

Interviews and systematic questionnaires are used in the majority of the countries. School managers generally complete questionnaires and in several countries, parents and pupils may be requested to reply to questionnaires, although this is more common for internal self-evaluation.

In Scotland the Inspectorate has its own tests for primary and secondary students up to 14 years. The results of central testing in secondary education are used to compare schools' results and are also used for self-evaluation. In several countries the external evaluation of a school is based partly on the results of internal self-evaluations.

In Bahrain the School Review Unit, which is part of the Quality Assurance Agency for Education and Training, undertakes regular school evaluations to measure schools' performance according to aspects such as student achievement, the quality and effectiveness of learning and teaching processes, and effective school leadership, management and governance. Each school is reported on using a 4-point scale: 'outstanding', 'good', 'satisfactory' and 'inadequate'. In 2011, four percent were rated 'outstanding', 30 percent 'good', 46 percent satisfactory and 20 percent 'inadequate'[56].

As a general rule the results of self-evaluation are used by external evaluators for a preliminary appraisal of a school before it is visited. As with external validation, internal monitoring and self-evaluations of progress towards objectives in schools requires a wide variety of techniques. Among those in use are review teams, questionnaires, checklists, interviews, team teaching, classroom observation, shadowing pupils as they work in various subjects, systematic planning and reporting and discussion groups.

In practice most education systems are moving towards a combination of these methods involving a degree of external monitoring of internal self-evaluation mechanisms[57].

54 Eurydice, "School autonomy in Europe: Policies and measure," (Brussels: European Commission, 2007).

55 Eurydice, "Evaluation of Schools providing Compulsory Education in Europe.", 2004

56 A.K. Al Saad, "Assessment and evaluation of leadership roles in sustaining educational reform in secondary schools in the Kingdom of Bahrain" (Unpublished Master in Education Thesis, University of Auckland, 2013).

57 Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. OECD Education Working Paper No. 42 ".

Quality Assurance Processes

In the Netherlands school inspectors are expected to assess school quality using the school supervision framework which is intended to provide insight into the value added by schools to students' school entrance levels, and insight into the prerequisites for adding value. The Educational Supervision Act assumes that school inspectors provide feedback to schools on their strengths and weaknesses, including suggestions on how to improve. In line with the Act, schools assessed by inspectors as 'weak schools' should be visited more intensively and more frequently than other schools, and inspectors should draw up written agreements with these schools about the improvements required. Schools may also be requested to describe how they will attempt to implement the school improvement action plan and these plans should be monitored thereafter by the school inspector. The underlying assumption of this approach is that schools will learn about their strengths and weaknesses and, if underperforming, act to improve. 'Improvement' is defined in the Act in terms of added value: the extent to which schools *add more value* to their students' school entry performance levels (and how that compares with the average value added by schools with similar student populations, in terms of school entry level, or students' socio-economic status)[58].

According to Geijsel et al (1996) a school is capable of change if it is able to implement innovations initiated either by the government or by the school itself. They emphasise the importance of the concept of the school as a learning organisation, cooperation between teachers, and transformative leadership[59].

As noted earlier, schools with a high capacity for innovation are expected to be more capable of successful change. In these schools improvement is a continuous process and they are probably more willing to accept the feedback from the school inspector and to use it for their own improvement. Schools with lower innovation capacity may be unreceptive or require support from external bodies/ actors such as external advisors to implement successful change or improvement.

Under the Bahrain Vision 2030, in 2008 the Quality Assurance Agency for Education and Training School Review Unit launched a five pillar programme aimed at putting in place developments to simultaneously improve performance in both schools and the Ministry of Education. The five pillars are: developing a Bahraini Excellent School model; Partnerships for Performance; Teaching for Learning; Leadership for Outcomes; and a Ministry Improvement Project. Each initiative is aimed at improving school performance through supporting and embedding a culture of school evaluation, data collection, analysis and feedback; improving school leadership; increasing schools' accountability and transparency, and developing mutual trust between schools and the Ministry of Education [60].

The School Improvement Programme, now in its fourth year, has laid the foundations for sustainable improvements of the school system across a hundred schools which work in clusters of four or five under the leadership of a Chief of Schools and supported by a Cluster Support Team comprising experienced teacher-coaches and supporters[61].

58 Ehren and Visscher, "The Relationships between School Inspections, School Characteristics and School Improvement."

59 F Geijsel, R Van den, and P Sleegers, "The innovation capacity of primary schools: a second pilot study," *pedagogische studiën* 73 (1996).

60 Al Saad, "Assessment and evaluation of leadership roles in sustaining educational reform in secondary schools in the Kingdom of Bahrain."

61 Ibid.

In Hong Kong the Quality Assurance Division (2009) claims that key components of a 'quality culture' include: setting clear and widely accepted goals for school education and having these goals understood clearly by all players in the school system; translating the goals into achievable, observable and measurable quality indicators for self-evaluation and external assessment. A framework of performance indicators was prepared to enable stakeholders to assess school performance and for the external validation of how schools perform and self-evaluate. Both procedures seek to review school development and effectiveness. Four domains are formulated within the framework: management and organization; learning and teaching; student support and school ethos; student performance (Quality Assurance Division, 2007)[62].

According to Yeung (2011) it seems that overall, in Hong Kong, the SSE and ESR function together as an accountability framework and simultaneously as an improvement cycle of the school. In terms of how they work together to enhance the internal and external accountability of the school, 84.6% of curriculum leaders identified that they 'help schools to understand own weaknesses, strengths and identify needs for improvement'. This was followed by 'promote implementation of curriculum reform proposals' (43.1percent); 'enhancement of teachers' professional competence' (24.6); and 'improving teaching approach' (21.5percent).

Finally, in identifying options to identify the deficiencies in the school evaluation policy, the most frequent choice was 'the procedures put stress too heavily on paperwork and documentation' (55.4 percent) and 'the policy has not taken enough account of the situation of individual schools' (47.7 percent). Further explanation revealed that 16.9 percent of curriculum leaders felt that 'the professional knowledge of the ESR reviewers is inadequate' and they were dissatisfied with the additional documentation workload, presumed 'essential for the survival of their school'[63].

Responsibilities for School Evaluation

It is rare for a country not to have a systematic school evaluation framework. Two thirds of OECD countries have regulations that require secondary schools to be inspected 'regularly' and almost as many have regulations that require schools to conduct periodic internal evaluations. Regular or annual self-assessment is, however, becoming mandatory in an increasing number of countries. It is strongly recommended as external evaluations by agencies such as central inspectorates are costly and tend to be practical only every three years or so[64].

School systems embarking on ambitious reforms tend to use more frequent external reviews. In New York, Qatar, and Bahrain (all of which are embarking on ambitious reform efforts) all the schools are to be reviewed by an external inspectorate once every year. All three systems plan to reduce either the length or the frequency of external reviews as their system improves[65].

In most countries school evaluation covers two main aspects: educational tasks and administrative tasks. Typically these two aspects are assessed by different agencies. In Hungary, for instance, regional pedagogical institutes or independent experts authorised by the local authorities are responsible for evaluating educational tasks. Other experts, also at the request of the local authority, analyse the efficiency with which schools manage their budget.

62 Yeung, "A School Evaluation Policy with a Dual Character: Evaluating the School Evaluation Policy in Hong Kong from the Perspective of Curriculum Leaders."

63 Ibid.

64 Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. OECD Education Working Paper No. 42 ".

65 M Barber and M Mourshed, "How the world's best-performing school systems come out on top," (McKinsey & Co., 2007).

In some countries responsibilities for school evaluation are shared between various levels of authority. In Denmark it is shared between the municipalities and the national agency responsible for external evaluation. In Iceland it is shared between the Ministry and the municipalities. In England, Hong Kong and New Zealand schools are inspected once every three-to-four years with a strong emphasis on ongoing school self-evaluation during the intervening period. In England a new inspection regime was introduced in 2005 which in most cases more than halved the number of days spent on inspection. Schools that perform well are inspected less frequently and less intensively than those that perform badly[66]. These inspections have three main purposes: to hold schools accountable to parents and the local community, to help schools plan for improvement, and to provide information on the national state of education[67].

In Yemen there are three levels of school supervision: Ministry, governorate and district level. At governorate and district level the Chief Supervisor is responsible for leading a team of supervisors (subject specialists) and reports to the Director of Education[68].

Under the national school project policy introduced a few years ago in Tunisia a new orientation is intended for school management and evaluation in a formerly highly centralized system. Schools are now independent educational units accountable for their own results and outcomes and students, parents, teachers, directors and inspectors have to report on school performance. Under the new policy the Minitry of Education undertakes evaluation of the education system on two levels using inspectors and national exams. The analyses of successive exam session results provides verification of the pertinence of the programmes, the effectiveness of the pedagogical methods and the efficiency of the institutions. The Inspectorate endeavours to evaluate and stimulate the education system and provide advice and information to the Ministry. It is reported, however, that inspectors still work under a bureaucratic, top-down model that regards monitoring from the point of view of compliance and not school improvement[69].

Recent research by Smith et al (2012) revealed that each successful system of school evaluation they identified in the literature had some form of middle tier that was distinct from national government. Middle tiers, or 'mediating layers', included local authorities (LAs) or municipalities and networks or clusters of schools by type and/or locality. The researchers found that successful middle tiers enable effective collaboration between schools where stakeholders are committed to working together and to sharing experience, and the expertise of all staff is harnessed in contributing to a self-improving culture. In such systems school improvement activity is focused firmly on the work taking place in schools and successful middle tiers are most effective when they are able to draw on existing evidence to challenge schools about their performance in a process which leads to necessary change[70]. Barriers to effective collaboration exist where there is a lack of trust between the middle tier and schools, or where difficult conversations are avoided, where schools are inward looking and do not assume responsibility for the success of the system as a whole. Barriers have also been encountered where the middle tier lacks sufficient capacity to support and challenge schools[71].

66 Ibid.

67 Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. OECD Education Working Paper No. 42 ".

68 E Allardyce, "Community Schools Project in Hodeidah, Ibb and Abyan. Supervision evaluation," (Yemen: UNICEF, 2001).

69 A Akkari, "The Tunisian Educational Reform: From quantity to quality and the need for monitoring and assessement," *Prospects* XXXV, no. 1 (2005).

70 Smith et al., "Enabling school-driven system leadership. Rapid Review."

71 Ibid.

14.3 The Results of School Evaluation

Usage and Users

The results of external school evaluations usually lead to the production of a national report to the central education authorities for the purpose of evaluating the system. In most countries inspectors rely on the results of the school evaluations they undertake to draw up public reports on the education sector as a whole. Finland however, keeps performance assessments and audits confidential, providing results only to the school that has been assessed and to their municipalities. Hong Kong has adopted a policy of not publishing performance data in order to reduce what is widely perceived to be the already excessive performance pressures on students and teachers[72].

In addition to the accountability motive, results from school evaluation can also be used as tools to reveal best practice and identify shortcomings in order to encourage schools to improve. Information on the implementation and achievement of the stated educational goals may be used by educational authorities to improve the allocation of resources.

Worldwide the level of inspector capacity to assess and report varies greatly. Some inspectors assess schools more thoroughly than others and some explain more about their methods. Others focus more on their suggestions for improvement, drawing up agreements and improvement plans with schools, and investing more in monitoring the school following the inspection visit. Inspectors giving feedback about poor performance aspects of a school, and following up on helping a school to improve these aspects, does seem to make more of a difference to school improvement. School inspectors should therefore combine these modes of operation when trying to promote school improvement[73].

It is important to note that Ehren & Visscher (2008) found that it is not the amount of feedback provided but the *way it is given* that contributes most significantly to school improvement. Inspecting schools without follow-up and monitoring activities is not very effective.

In many cases systems that set out to be transparent about the performance of their schools (typically by publishing the inspection or examination data) create greater public accountability and awareness which, in turn, drives further improvement. In New Zealand the Education Review Office (ERO) publishes the information gathered in all school reviews over a period of six months. In the words of one New Zealand policymaker: '[We] make everything public; it creates tension in the system, transparency over the problems, and that drives improvement'[74]. In Scotland Her Majesty's Inspectorate of Education (HMIE) publishes evaluations of the school system as a whole every three years in order to promote

72 Barber and Mourshed, "How the world's best-performing school systems come out on top."

73 Ehren and Visscher, "The Relationships between School Inspections, School Characteristics and School Improvement."

74 Barber and Mourshed, "How the world's best-performing school systems come out on top."

improvement across the system. When school evaluations are carried out by decentralised educational authorities, evaluations do not systematically lead to the production of a national report with the purpose of assessing the school system. The evaluation conducted by the local authorities is used primarily by these authorities or the schools themselves.

In most countries evaluators are required to check whether schools respond appropriately to the recommendations or instructions for improvement issued after an evaluation. The extent of follow-up activity depends on how effective the school was judged to be and its capacity to improve. This practice applied in New Zealand, the United Kingdom and the Netherlands. In the Netherlands the frequency and form of school inspections are based on the quality of the school and the risks of quality decline. Poorly performing schools are inspected sooner and more often than better performing schools[75].

In some countries findings from external school evaluations performed at the local or regional level are an important source of information for central education authorities. This applies to Denmark, where schools are externally evaluated by the municipalities. The findings from these evaluations are then processed by a national agency specialized in education, the Danish Evaluation Institute. These findings are then used by the central education authorities as a source of data on the state of the school system.

In a minority of countries findings from the external evaluation of schools are not used by the central education authority to monitor the school system. This applies to those countries in which no central school inspectorate has been established. Where there is a lack of a national inspectorate the national body responsible for evaluating the school system relies chiefly on students' achievement.

The results of school internal evaluation or activity reports provided by individual schools might be examined by central authorities but are seldom used by education authorities or specific national bodies for the purpose of evaluating the entire school system. The central education authorities only use the results of internal evaluations directly for monitoring purposes in a minority of countries. Municipalities in Sweden and Norway do use findings from internal evaluations to inform central education authorities.

Results of individual teacher appraisals are seldom used for external school evaluation. This may be explained by the fact that in most countries teacher evaluation and school evaluation serve distinct purposes. Individual teacher evaluation usually has a limited focus as it is designed to identify priorities for individual professional development. In some countries such results are taken into account by school heads when assessing teaching quality in their school. Teacher assessments can thus assist with the development of improvement plans for schools[76].

75 Janssens and van Amelsvoort, "School self-evaluations and school inspections in Europe: An exploratory study."

76 Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. OECD Education Working Paper No. 42 ".

Providing More Support for Using Evaluation Results

Accountability systems are beneficial for school improvement providing that they engage the skills and commitment of the school staff. School leadership is needed to make external accountability beneficial for school improvement. This involves school leaders developing skills in interpreting data and test results in order to implement strategies for improvement. Self-evaluation and improvement are important responsibilities carried out by school leaders[77]. It is important to provide training not only in the use of the instruments but also in the management of the evaluation process.

In several countries performance indicators are being developed to allow school leaders to implement the recommendations for improvement formulated in the course of school evaluation. These indicators are also designed to provide schools with tools to carry out self evaluations. The construction of indicators and assessment tools requires technical skills that are not always available in schools[78].

One possible way to reassure those being evaluated is to ensure that the evaluators are themselves evaluated. Most countries have internal evaluations of the inspection work. Internal evaluation of the inspectorate includes discussions on approaches and instruments within the inspectorate, often under the supervision of a co-ordinating inspector or a chief inspector. In Scotland an audit unit is responsible for evaluating the work of the inspectorate, including the results of the follow-up to the inspections, while a working group of inspectors is engaged permanently on the effectiveness of the guidelines[79].

If evaluation seeks to improve the quality of schools it is important that staff, who are best positioned to decide what should be evaluated, play an active part in defining standards and designing the evaluation process. Conversely, when evaluation is used primarily to report to the education authorities, or to supply information for the purposes of external evaluation, it is preferable for the authorities to determine the criteria in order to have comparable data at their disposal[80].

Rebollosa et al (2005) suggest that accountability is replaced by advising, with the evaluator assuming a role of counsellor, helping teachers to diagnose their situation and refine their ability to enhance learning (schools as learning organizations)[81].

Overall schools and school staff will accept external evaluation recommendations more readily if they are consulted in the design process and respect the evaluator and evaluation process[82].

Research on the Comprehensive School Reform (CSR) model carried out by Taylor (2006) highlighted that the greatest challenge to comprehensive school reformers is sustaining reform over a time period long enough to produce substantial effects[83]. Quoting Datnow (2001), Taylor points out: 'When one speaks of the sustainability of a reform, one is typically interested in knowing whether the reform lasts over time and becomes an institutionalized feature of a school'[84].

77 B Pont, D Nusche, and D Hopkins, eds., *Improving school leadership*, Vol. 1 & 2 (Paris: OECD, 2008).

78 Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. OECD Education Working Paper No. 42 ".

79 R Standaert, *Inspectorates of education in Europe: a critical analysis* (Leuven, Belgium: Acco, 2001).

80 Eurydice, "Evaluation of Schools providing Compulsory Education in Europe."

81 Rebolloso, Fernandez-Ramirez, and Canton, "The Influence of Evaluation on Changing Management Systems in Educational Institutions."

82 B N Haile, "School Evaluation — Self Evaluation is not sufficient," *British Journal of In-Service Education* 10, no. 2 (1984).

83 J E. Taylor, "The Struggle to Survive: Examining the Sustainability of Schools' Comprehensive School Reform Efforts," *Journal of Education for Students Placed at Risk (JESPAR)* 11, no. 3-4 (2006).

84 Datnow, 2001, cited in ibid., p.335.

14.4 Implementing School Evaluation: Challenges and Options

Evaluation systems are intended to improve achievement through three mechanisms: strong incentives for school staff to improve their performance, high-quality information to guide these improvement efforts, and technical assistance to help schools that are unable to reach the goals on their own[85]. In practice these mechanisms (incentives, guidance and support) might be lacking, which would then compromise the implementation of recommendations for improvement.

Competencies for School Evaluation: Challenges

In particular it is noted that even if mechanisms are in place, without the necessary competencies and skills to gather evidence, analyse data and interpret results, the results of self-evaluation activities and school performance measures cannot be understood and translated into action. The following challenges in skill development have been identified:

- Lack of competence in the techniques of self-evaluation and external school evaluation.
- Inadequate level of technical evaluation skills among external evaluators, school leadership and school staff.
- Limited capacity at national level to follow up on evaluation results.
- Lack of the skills within schools to use the results of self-evaluation and school performance measures for improvement.
- Limited skills among teachers to analyse and interpret student performance data[86].

85 L Hamilton, M Berends, and B Stecher, *Teachers' Responses to Standards-Based Accountability*. (Rand Education, 2005).

86 Santiago, "OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes: the Main Conclusions."

School Leaders and Teachers

In most countries internal evaluation is carried out by the school head, generally assisted by the school staff. Effective school leadership is needed to carry out internal evaluations to develop competencies within the school to make the most of evaluation results and to engage the teaching staff in the use of data and analytical skills.

As a teaching background does not necessarily prepare staff for evaluation practice, the school team might lack knowledge in the skills required to carry out self-appraisal and use evaluation results, such as setting goals and measuring progress[87]. School leaders therefore need to be provided with training in the use of the instruments and in the management of the evaluation process. An increasing number of countries provide school leaders with support and training to prepare them for internal evaluation as well as to help them to use evaluation results effectively.

Training in school self-evaluation is not a widespread practice. In Scotland an applicant for a head teacher post must hold the Scottish Qualification for Headship, which includes training in evaluation as well as other aspects of education management. In service training courses are provided for head teachers and teachers in several countries.

Supporting measures are often available to schools to carry out and use evaluation results. Guidelines for internal evaluation are usually made available either by the national inspectorate or the Ministry of Education. In some countries schools are supplied with statistical indicators intended to monitor the education system which allows comparisons of the performance of their pupils with that of other pupils. School heads may also be provided with performance indicators (France, Portugal, and the United Kingdom)[88].

The failure of many school reforms can be explained by inconsistencies between reform objectives and the behaviour of the teachers and school heads that implement them. If school evaluation design is inadequate, objectives are inconsistent with established programmes, costs to individuals are excessive compared to the expected benefits, or the evaluator is not respected[89], school participants are unlikely to commit themselves to its implementation. If teachers are involved in planning and implementing evaluation schemes they are more likely to sustain reform efforts. Perceptions of a motivated teacher increase the chances of students being motivated to adopt reform[90].

External Evaluators

In most countries candidates for inspector positions are required to have experience in education or teaching. Candidates are usually required to have a teaching qualification for the level of education they are going to evaluate. Experience in school management or specialisation in evaluation may also be required. As a general rule inspectors must have acquired several years of senior management experience. In Germany this must be as a principal or in a senior position in a teacher training institution. In Poland the requirements for appointment as an inspector are a minimum of six years of employment in a teaching post and the completion of in-service training courses related to administration or management, or a minimum of two years experience in a managerial position at school. In New Zealand, although no teaching qualification is formally required to join the Education Review Office (ERO), Review Officers should have acquired previous experience in management.

87 Pont, Nusche, and Hopkins, *Improving school leadership, Vol. 1 & 2.*

88 Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. OECD Education Working Paper No. 42 ".

89 Haile, "School Evaluation — Self Evaluation is not sufficient."

90 K Leithwood, R Steinbach, and D Jantzi, "School leadership and teachers' motivation to implement accountability policies," *Educational administration Quarterly* 38, no. 1 (2002).

In the vast majority of countries external evaluators are permanent civil servants employed by the central (or regional) authority responsible for carrying out external evaluation. In the countries offering civil servant status to evaluators, candidates have to meet demanding criteria: they are generally expected to hold a degree, to complete a specialist course, to succeed in a competitive examination and to complete a probationary period. An interview with the examination committee is also a standard procedure in the recruitment process in France. In Spain the competitive examination phase comprises three different parts which assess candidates' knowledge of teaching techniques, administrative issues and legislation on education as well as the command of appropriate techniques to carry out inspections.

Special training in evaluation is sometimes offered following recruitment or appointment. In Portugal and Ireland, for example, training of inspectors includes special courses related to evaluation. In the few countries in which candidates have to undergo specialist training in evaluation prior to appointment, new inspectors are monitored[91] closely.

The level of external evaluation capacity is reported as varying greatly both across and within countries. Some assess schools more thoroughly than others and some explain more about their methods. Others focus more on their suggestions for improvement, drawing up agreements and improvement plans with schools, and investing more in monitoring the school following the inspection visit. Providing feedback about poor performance aspects of a school, and following up on helping a school to improve these aspects, does seem to make more of a difference to school improvement. External evaluators should therefore be well trained in these skills when trying to promote school improvement[92].

Effective feedback has to be provided in a systematic way to enhance achievement. Promoting the better use of existing systems to assess the school system at all levels (national, regional/local) requires that the evaluators communicate their recommendations properly, and that those involved at each level strive to integrate these recommendations in processes to improve the system[93].

Competencies for School Evaluation: Options

Policy options for the development and maintenance of the competencies required for effective school evaluation are offered as follows:

- Promote and support capacity development for the external and internal evaluation of schools.
- Strengthen school leaders' (SL) capacity for school development.
- Explicit recognition of the key role of SLs in promoting effective self-evaluation.
- Reflect these skills in national/professional SL competency profiles, such as skills in class observation, interviewing, data gathering, analysis and interpretation of results.
- Create new evaluation roles within school staff.
- Ensure objectivity, coherence and credibility of external school evaluation.
- Careful selection and monitoring/evaluation of external evaluators.
- Ongoing capacity development for external evaluators.
- Organise external evaluations to enhance uniformity of evaluators' judgements.
- Seek feedback systematically from schools on external school evaluations.
- Promote engagement of all school staff in school self-evaluation[94].

91 Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. OECD Education Working Paper No. 42 ".

92 Ehren and Visscher, "The Relationships between School Inspections, School Characteristics and School Improvement."

93 Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. OECD Education Working Paper No. 42 ".

94 Santiago, "OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes: the Main Conclusions."

Optimising School Evaluation Results: Options

Policy options for the feedback and reporting of school evaluation results are offered as follows:

- Optimise the feedback of nationally collected data to schools for self-evaluation and improvement.
- Ensure transparency in external school evaluations.
- Make criteria and instruments for evaluation available publically.
- Report contextual information with school performance measures.
- Explore ways to reflect the value added and progress in student learning in school performance measures.
- Ensure and clarify procedures for the systematic follow up of external school evaluations[95].

95 Ibid.

14.5 Cultural and Contextual Issues in School Evaluation

Recently 'culture' has emerged as an issue in the field of evaluation. It has created a heightened awareness of the need for evaluators to understand the complexity of developing and implementing school evaluation processes appropriate to diverse cultural contexts. Evaluation scholars from non-Western systems propose that evaluations characterised by Western culture and ways of thinking overlook indigenous knowledge(s), threaten the cultural relevance and validity of evaluation results. There is an increasingly recognized need for cultural considerations to be incorporated within evaluation approaches such as school-based self-evaluation[96].

Cultural differences can also trigger conflict when western educational terms are interpreted differently and carry different 'emotional' connotations in particular contexts. In Oman the term 'measuring performance' is reported to be less threatening to schools than the term 'evaluation'. Similarly unacknowledged anxieties about training and uncertainties about the perceived status of particular roles can often inhibit progress towards developing a workable school evaluation programme[97].

In looking at the determinants of educational achievement in the Middle East and North Africa (MENA), Badr et al (2003) point out that existing literature on education production functions is ambiguous regarding the relationship between school resources and student achievements, with very little empirical evidence on MENA. In their research they conclude that in MENA student factors are more significant than school variables in explaining achievement[98] although institutional reform, school autonomy and accountability, as determined by school evaluation, do appear to be important[99].

The 2012 publication by Pearson, *The Learning Curve: Lessons in Country Performance in Education* gives a clear message that although income matters, culture may matter more in raising educational quality and promoting better educational outcomes. More important than money is the level of support for education within the surrounding culture[100].

96 M Samuels and K Ryan, "Grounding Evaluations in Culture," *American Journa lof Evaluation* 32, no. 2 (2010).

97 G Plummer, "Beyond the doorstep. Arabian (k)nights and personal nightmares: a working life in Oman," Changing English 12, no. 1 (2005).

98 M Badr, O Morrissey, and S Appleton, "Determinants of Educational Attainment in MENA. CREDIT Research Paper," (Centre for Research in Economic Development and International Trade (CREDIT), University of Nottingham, 2003).

99 P Glewwe and M Kremer, "Chapter 16: Schools, Teachers, and Education Outcomes in Developing Countries," in *Handbook of the Economics of Education*, ed. E Hanushek and F Welch (Elsevier, 2006).

100 P Kielstra, "The Learning Curve. Lessons in Country Performance in Education " (Pearson; The Economist Intelligence Unit (EIU), 2012).

The gap between the 'official' reform policies upheld by the global education agenda and promoted by the international development community, and the realities of schooling in the cultural contexts of the MENA countries adopting them, is referred to by Herrera and Torres (2006)[101]. In relation to education reform in Egypt, including the 'new standards and accountability measures', Chiara (2010) also points to the problem of applying global/western policies in countries that are different in 'culture, traditions, religion, geographic areas and historical paths' from those where the policies originated[102].

Donn and Al Manthri (2013) in their exploration of education in the MENA region also refer to the problem of a country's educational reforms having been defined 'in relation to what happens elsewhere'. This view results in borrowed policies that 'do not necessarily sit well ... promising much but delivering little'[103].

More specifically, in relation to school evaluation reform, Akkari (2005) reports from Tunisia that radical changes in the traditional status of school inspectors are needed along with the need for a new national agency for monitoring and evaluating students' outcomes and schools' performance[104]. In Tunisia, like other 'developing' nations, attempts to develop school improvement have been hampered by globalizing pressures to import or transfer models of educational reform that have been shown to work in developed countries, particularly in Europe, but that are not always compatible with the social and cultural contexts to which they are transferred. Akkari maintains that better monitoring and evaluation of the quality of education in Tunisia requires the creation of a new national institution where researchers, inspectors and policy-makers work together to evaluate at different levels (classroom-based assessment, school-level assessment, national and international assessments of achievement) the effectiveness of Tunisian schools[105].

Akkari's proposed approach is supported by the work of the Egyptian-based Middle East Institute of Higher Education (MEIHE) which seeks to align school-based and higher education reform through empowering teachers, the 'backbone to education reform at school level'[106] in their intellectual and professional development. Zaalouk & Megahed (2013) seek to create MENA educational knowledge that can inform educational decision making through collaborative research in education, including that on the implementation of the externally introduced school reform processes. It is reported that other MENA countries such as Qatar and Saudi Arabia have indicated interest collaborating with MEIHE and subjecting their school reforms to the same scrutiny[107].

101 L Herrera and C Torres, *Cultures of Arab schooling : critical ethnographies from Egypt* (New York: State University of New York, 2006).

102 D Chiara, *Globalization Impacts on Education in Egypt* (Italy: European University Institute, 2010), 14.

103 G Donn and Y Al Manthri, *Education in the Broader Middle East: borrowing a baroque arsenal* (Oxford: Symposium Books, 2011), 11-12.

104 Akkari, "The Tunisian Educational Reform: From quantity to quality and the need for monitoring and assessement."

105 Ibid.

106 M Zaalouk and N Megahed, "Teacher Professional Development and School Reform in Post-revolution Egypt: The Case of Action Research in Accredited Schools (ARAS) " (paper presented at the Comparative & International Education Society conference, New Orleans, USA, March 10-15, 2013 2013).

107 Ibid.

Conclusion

In response to the demands for high quality education, a growing emphasis is being placed upon comprehensive school evaluation systems as they are central to school improvement efforts and systems of school accountability.

A consensus has emerged on the need for clarifying the purpose of evaluation and on the importance of including a broad set of stakeholders in the design and implementation of the evaluation process. Effective evaluation schemes require the acceptance and support of those being evaluated.

Better articulation between school evaluation and other components of the school system's evaluation framework and better alignment between evaluation procedures led by different agencies at different levels (municipalities, school providers, inspectorates) would help prevent inconsistency of objectives and strengthen the coherence of the evaluation system.

School improvement should be based on a realistic and shared diagnosis of the problems and obstacles prevalent in a school that is preventing it moving ahead. If the inspection process is presented with a false picture of the school, then it is unlikely to result in the identification of areas for development resulting in realistic school improvement[108].

Connection between the formative and summative functions of evaluation is often deemed insufficient. Similarly it seems clear that considerably more technical support and training is needed to allow schools to use the findings from external evaluation in a way that is conducive to school improvement[109].

108 Plowright, "Self-evaluation and Ofsted Inspection."

109 Faubert, "School Evaluation: Current Practices in OECD Countries and a Literature Review. OECD Education Working Paper No. 42 ".

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APPENDIX

Appendix 1: Terms of Reference

1.1 TERMS OF REFERENCE FOR THE EVALUATION OF THE EDUCATION SYSTEM (GRADES 1-12)

"As education is the basic pillar of progress and development, and in order to produce a responsibly aware generation with expertise and skills, and aspiring to a higher level of knowledge, it is necessary to conduct a comprehensive assessment of the educational march in order to achieve these aspirations and benefit from the available job opportunities in the public and private sectors."

His Majesty Sultan Qaboos bin Said on the event of the opening of the Fifth Session of the Majlis Oman, 31st October 2011.

1.1.1 Educational Reform in the Sultanate of Oman

The Ministry of Education in the Sultanate of Oman is carrying out an ambitious reform programme aimed at achieving comprehensive qualitative improvements in all areas and at all grade levels within the education system. Central to this reform programme was the replacement of the General Education system with a new Basic Education model covering grades 1 to 10 and a Post-Basic Education model covering grades 11 to 12.

In 1995 the international organisation Educational Consultancy Services (ECS), in cooperation with the Ministry of Education, submitted a report in which the principal recommendation was the introduction of a new Basic Education system covering grades 1-10. The Ministry first introduced Basic Education in 1998. It is subdivided into two stages, i.e. Cycle One (grades 1-4) which is co-educational and Cycle Two (grades 5-10) which is taught in separate boys' and girls' schools. It has been phased-in in terms of both grade levels and schools. By 2006 materials had been developed for all ten grade levels and will shortly involve all schools. The new Post-Basic Education system was introduced at the beginning of the 2007/2008 school year. All students, whether graduating from Basic Education or General Education, are accommodated in this new system. As with Cycle Two, Post-Basic Education is taught in separate school for boys' and girls'.

In addition to these major curricular reforms the Ministry has been engaged in a number of other reforms to the education system. These reforms have included the assessment system, the upgrading of teachers' qualifications, promoting new teaching and learning methodologies and encouraging schools to work towards continuous improvement.

1.1.2 The Need for Evaluation

As the speech of HM Sultan Qaboos makes clear, the educational system needs to be evaluated regularly to see if the intended outcomes are being achieved. The pressure for change means that the Ministry must adapt continually and improve in order to meet the expectations of its stakeholders.

One of the richest sources of information about the quality of an education system is obtained by testing students and using the results to measure student performance against international educational standards. The Ministry has participated in international studies such as TIMSS and PIRLS to measure student performance in Oman against international educational standards.

Following six years of delivering the Basic Education Cycle One (Grades 1-4) programme, the Ministry engaged an international educational company to evaluate the success and effectiveness of the system. A number of evaluation studies have also been carried out on various aspects of the system. The Ministry would now like to evaluate its entire school education system. The Ministry is inviting tenders for a consultancy company to be responsible for carrying out the evaluation. The Ministry will appoint a team of Omani educators to assist with the evaluation. The consultancy company will be expected to train this team with the aim of building an internal capacity within the Ministry to carry out future self-evaluations.

Building capacity within the Ministry to self-evaluate its education system will bring considerable benefits. It will help to:

- Improve the professional development of the Ministry's staff. When staff use the tools of self-evaluation they are more likely to become more self-aware, more reflective and more self-critical. It will also mean the Ministry will have the capacity to create a permanent state of ongoing evaluation of all aspects of its education system.

- Enable the Ministry to respond to social and economic change, to constantly challenge complacency and to monitor and measure the effectiveness of the education system. We need to know where we are as a Ministry, where we are going and how we will know when we have arrived.
- Raise educational standards: this involves not only the raising of pupil attainment scores, but also the application of more effective learning and teaching in which attainment levels rise as a natural consequence.
- Improve the Ministry's ability to be accountable to its stakeholders: the Ministry has a responsibility to render an account to government, to parents and community in return for the investment and support it receives.

1.1.3 Aim and Scope of the Evaluation

The Ministry would like an international educational company to carry out an evaluation of both Basic Education and Post Basic Education (i.e. grades 1-12). An important aim of the consultancy will be to create a self-appraisal framework and to develop the skills of Ministry staff to enable them to evaluate the effectiveness of the school education system. The company will be responsible for the development of appropriate procedures and instruments to analyse the following:

Student Learning

- Students' performance, particularly in reading, writing, numeracy and science, e.g. by devising national tests in the main subject areas (e.g. Arabic, English, Mathematics and Science) and analysing students' results in these and in international tests, to compare attainment of Omani students with students internationally, and to provide recommendations based on the analysis.
- Academic support systems (including Attainment Follow-up Committees and electronic systems) for students who under-achieve on the learning objectives and to promote teaching and learning that recognises individual differences among students.
- Inclusive education – effectiveness of delivery and support offered to teachers.
- Officially stipulated and actual length of class periods, school day and year and appropriateness of the schools' daily plan (e.g. number of breaks) in comparison to international practice.

Curriculum and Assessment

- Appropriateness of scope and sequence for Grades 1 to 12, student textbooks, learning resources, teachers' guides and support documents in terms of international best practice.
- Enhancement of values in the curriculum.
- Study plan - the subjects and activities offered and the number of periods allocated to them each week.
- Teaching and learning methodologies, including the use of IT as a learning tool.
- Assessment and evaluation system and practices – tests and exams, continuous assessment, summative and formative assessment.
- The range and effectiveness of extra-curricular activities.

Relevance

- Appropriateness of courses, curriculum content and services to the needs of the labour market and higher education.
- Appropriate ways to encourage and develop entrepreneurship skills.
- The extent to which soft skills such as lifelong learning and good citizenship are developed.

Teachers

- The effectiveness of teachers in the classroom.
- Teaching loads, class sizes and administrative duties.
- Teacher instructional support systems within schools – senior teachers, principals and the use of mechanisms such as coaching.
- Effectiveness of subject supervisors in supporting and evaluating teachers.
- Effectiveness of training and support given to newly qualified teachers.
- Professional development – ascertaining needs, delivery methods, effectiveness.
- The extent of job satisfaction among teachers and ways to improve their motivation.
- Accountability and incentives for teachers and other Ministry staff.

School Culture

- School effectiveness – including role and performance of teachers, senior teachers, school administrators, principals, and technical support staff – and consideration of issues such as accountability, professionalism and the use of incentives.
- Effectiveness of administrative supervisors and senior and chief supervisors in making schools more effective.
- Review regulations regarding student attendance, repetition and behaviour.
- Participation of parents and the local community, the role of parents' councils and mechanisms to facilitate communication between schools and parents, and the involvement of schools with the local community.
- School support systems – social specialists, medical staff, career guidance specialists, activities specialists, finance and administrative specialists, data entry specialists and any others.

Infrastructure

- Suitability and use of school buildings and facilities such as meeting and resource rooms, storage facilities, playgrounds and canteens.
- Suitability and use of equipment – to include classrooms, the Learning Resource Centres, science and computer labs and Career Guidance Resource Rooms.
- Network systems and level of internet connectivity.

Governance and Administration

- Review documentation relating to the present philosophy of education.
- Efficiency and capacity of the system – enrolment, repetition, drop-outs, survival rates, transition rates to Post-Basic Education – which takes into account any gender, regional and grade level differences.
- Appropriateness and effectiveness of present procedures, indicators and data collection methods to assist in monitoring and evaluating the quality of the system.
- Appropriateness and effectiveness of present policy development system.
- Review the present organisational structure within the Ministry of Education (see Appendix 1: "Organisation of the Ministry of Education") and provide proposals on the role and governance of bodies within the Ministry.

Finance

- Appropriateness of the share of the government budget allocated to the Ministry of Education.
- Effectiveness and efficiency of the way the Ministry allocates its financial budget.
- Appropriateness of costs per student allocated in Basic Education Cycle One, Basic Education Cycle Two and Post-Basic Education.
- Appropriateness of decentralising budget decisions to regions and schools.

Expectations for Consultancy

While some of the consultancy work will be conducted in the consultants' host country, a significant amount of the work will be undertaken in the Sultanate.

The consultancy team will be expected to build the capacity of the Ministry to carry out evaluation studies by working with a Ministry cadre of educators and providing them with appropriate experience and training.

Appendix 2: Project Team

Supervisory Committee

Member	Position
HE Dr. Madiha Ahmed Al-Shaibani	Minister of Education
HE Dr. Hamood Khalfan Al Harthy	Undersecretary for Education and Curriculum "Deputy Head"
Dr. Ahmed Mohammed Al-Hinai	Advisor to the Minister for international educational relations, acting director of the Technical Office for Studies and Development
Dr. Sana Sabeel Al-Balushi	Director General of the National Career Guidance Centre
Dr. Zuwaina Saleh Al Maskari	Director General of Educational Evaluation
Dr. Nabhan Saif Al Lamki	Director General of Curriculum Development
Fatmah AbdulAbbas Al Noorani	Director General of Private Schools
Dr. Mohammed Suleiman Al Hosni	Assistant Director General of Financial Affairs
Maryam Mohammed Al Ryami	Director of Planning and Needs Department
Dr. Mohammed Talib Al Kiumi	Educational Expert, Minister's Office "Member and Rapporteur"

Technical Committee Members

Name	Position	Start Month on Project	End Month on Project
Dr. Rashid Mohammed Salim Al Hajri	Educational Expert at the Technical Office for Studies and Development Team Leader	January 2013	December 2013
Hafsah Saif Hamdan Al Sabti	Educational Researcher at the Technical Office for Studies and Development Deputy Head	January 2013	December 2013
Dr. Saleh Ahmed Al Habsi	Educational Expert at the Technical Office for Studies and Development	March 2013	December 2013
Laila Issa Said Al Kindi	Educational Expert at Her Excellency's Office	March 2013	December 2013

Technical Committee Members

Name	Position	Start Month on Project	End Month on Project
Fahad Khulfan Mohammed Al Shamsi	Specialist of Financial and Administrative Control at the Directorate-General of Financial Affairs	January 2013	December 2013
Hunaizah Nasir Mohammed Al Jahdhami	English Training Specialist at the Directorate-General of Education at Muscat Governorate	January 2013	December 2013
Ishaq Hamed Ali Al Sulaimani	Technical Member of Examinations and Students' Affairs at the Directorate-General of Educational	January 2013	December 2013
Humaid Salim Mohammed Al Hajri	Translator at the Technical Office for Studies and Development	January 2013	December 2013
Hamed Masoud Al Khayari	System Supervisor at the Directorate-General of Information Technology.	September 2013	December 2013
Nawal Ali Al Ajmi	Literacy Supervisor at the Directorate-General of Educational Programs	September 2013	December 2013
Saleh Salam Nasir Al Haimali	International Relations Specialist at the Technical Office for Studies and Development Member and Rapporteur	January 2013	December 2013
Shinounah Salim Al Habsi	Educational Expert at the Office of the Ministry Undersecretary for Education and Curricula and the Ministry's representative at UNICEF	October 2013	December 2013
Dr. Nasir Salim Nasir Al Ganbosi	Director of Studies and Technical Support Department at National Centre of Vocational Guidance	October 2013	December 2013
Salim Mohammed Abdullah Al Kharoosi	Deputy Director of Human Science Curriculum Department For English, Directorate General of Curriculum Development	January 2013	October 2013
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Ali Abdullah Mohammed Al Hatmi	Educational Researcher, Directorate General for Human Resources	January 2013	October 2013

Technical Committee Members

Name	Position	Start Month on Project	End Month on Project
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Juma Saleh Ghabish Alhashmi	Educational Curriculum Member	September 2013	October 2013
Hilal Saeed Mohamed Al Amri	Head of Needs and Building Department	September 2013	October 2013
Huninah Saeed Essa Al Barwani	Head of Professions Department	September 2013	October 2013
Hanan Rashid Bin Salim Al Abri	Member of IT Systems	September 2013	October 2013

New Zealand Education Consortium Organisations

Maven International Limited

Uniservices, The University of Auckland

The Auckland University

Cognition Education

Associated New Zealand Support Agencies

New Zealand Council for Educational Research

New Zealand Institute of Economic Research

Education New Zealand

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Kathryn Hodson	Cognition Education
Michael King	Cognition Education
Derek Gill	New Zealand Institute of Economic Research
Graeme Cosslett	New Zealand Council for Educational Research
Rachel Simpson	Education New Zealand

Appendix 3: Education Council Terms of Reference

Appendix Royal Decree No. 48/2012 on establishing the Education Council and its system.

We have decreed the following:

- **Article One:** a council called the 'Education Council' shall be established and to be affiliated to the Diwan of Royal Court and the provisions of the attached system shall be applied to the Council.
- **Article Two:** The Education Council shall have a Secretariat General that assists it in practicing its prerogatives. The Secretariat General shall have its juristic personality, financial and administrative independence and shall be headquartered in the Governorate of Muscat.
- **Article Three:** The Secretariat General of the Education Council shall take over all the allocations and assets of the Higher Education Council. All employees at the above mentioned council shall be transferred to the Secretariat General together with their financial grades.
- **Article Four:** Chairman of the Education Council shall issue the necessary regulations to implement provisions of the attached system after being approved by the Council. All laws, decrees and systems applied on the Diwan of Royal Court shall be applicable to the Secretariat General of the Education Council and its employees.
- **Article Five:** The Royal Decree No. 48/2012 on the Establishment of the Education Council and its system shall be canceled together with all that may contravene this decree and contradicts its provisions.
- **Article Six:** The decree comes into force from the date of its issue.

Issued on 10/9/2012

Article Three

Terms of reference:

1. Set the general policy for that guides the Council to practice its prerogatives.
2. Set the overarching education policy including all education types and stages and guide the education process in line with the public policy of the State and sustainable development requirements and to achieve the cultural, social, scientific and economic objectives of the Sultanate and monitor the implementation of that policy.
3. Set an education strategy within the framework of the public policy of the State in cooperation with other concerned authorities and to monitor the implementation of that strategy.

4. Monitor and evaluate the education quality in all stages and types and take due actions to ensure quality of the outcomes.
5. Review and develop education plans, programmes and policies in line with different changes and in consistency with the public policy of the State.
6. Develop policies and appropriate mechanisms to achieve connectivity and integration between education outcomes in all education types and stages including applied, technical and vocational education.
7. Link the teaching programmes and study specializations with labor market requirements.
8. Organize students' admission in higher education institutions and specify their numbers in coordination with the concerned authorities.
9. Approve the construction of educational institutions within the framework of the public policy of the State prior to granting construction license.
10. Approve the higher education institutions' strategies and plans and monitor implementation of those strategies.
11. Review and develop curricula, pedagogical programmes, examination and assessment policies, administration and supervision methods.
12. Follow up the education affairs and whatever impediments to be overcome.
13. Examine the status of the educational institutions' employees and take actions to care for them by improving the performance of those institutions.
14. Examine the annual reports on education and performance of educational institutions and take due actions.
15. Decide on the administrative penalties suggested by the concerned authorities on all types and stages of the educational institutions as per Legislations in force.
16. Support and motivate preparation and publication of relevant studies in addition to documentation of cooperation with international counterparts and education organizations.
17. Develop documentation system related to all types and stages of education as per laws in force.
18. Supervise the Oman Academic Accreditation Authority within the framework of the provisions of the Royal Decree No. 54/2010.
19. Suggest draft laws related to education and monitor and develop the education systems and laws in force.
20. Study education-relevant international convictions and review the convictions in force.
21. Monitor the implementation of the Board's policies and decisions.
22. Specify the Secretariat's powers.
23. Approve the Secretariat's organizational structure.
24. Adopt the necessary regulations for the Education Council to practice its powers.
25. Approve the annual budget and final calculation.
26. Study whatever issues related to its powers H.M. the Sultan or the Council of Ministers or stakeholders forward to the Council.
27. Report annually on all types and stages of education and submit that report to the Council of Ministers.

Appendix 4: Ministry of Education Terms of Reference

Ministerial Decree No. 69/2008

Approval of the administrative divisions of the Ministry of Education and determining its terms of reference

In accordance with the Royal Decree No. 37/2008 on determining the Ministry of Education's terms of reference and approval of its organizational structure, with endorsement of the Ministry of Finance and endorsement of the Ministry of Civil Service, and in pursuance with the public interest the following has been decided:

- **Article One:** The administrative divisions of the Ministry of Education shall be structured as per the appendix attached.
- **Article Two:** The Ministerial Decree No. 58/2001 on the Approval of the administrative divisions of the Ministry of Education and its amendments shall be canceled together with all that may contravene this decree and contradicts its provisions.
- **Article Three:** The decree comes into force from the date of its issue.

Issued on: 30/3/2008

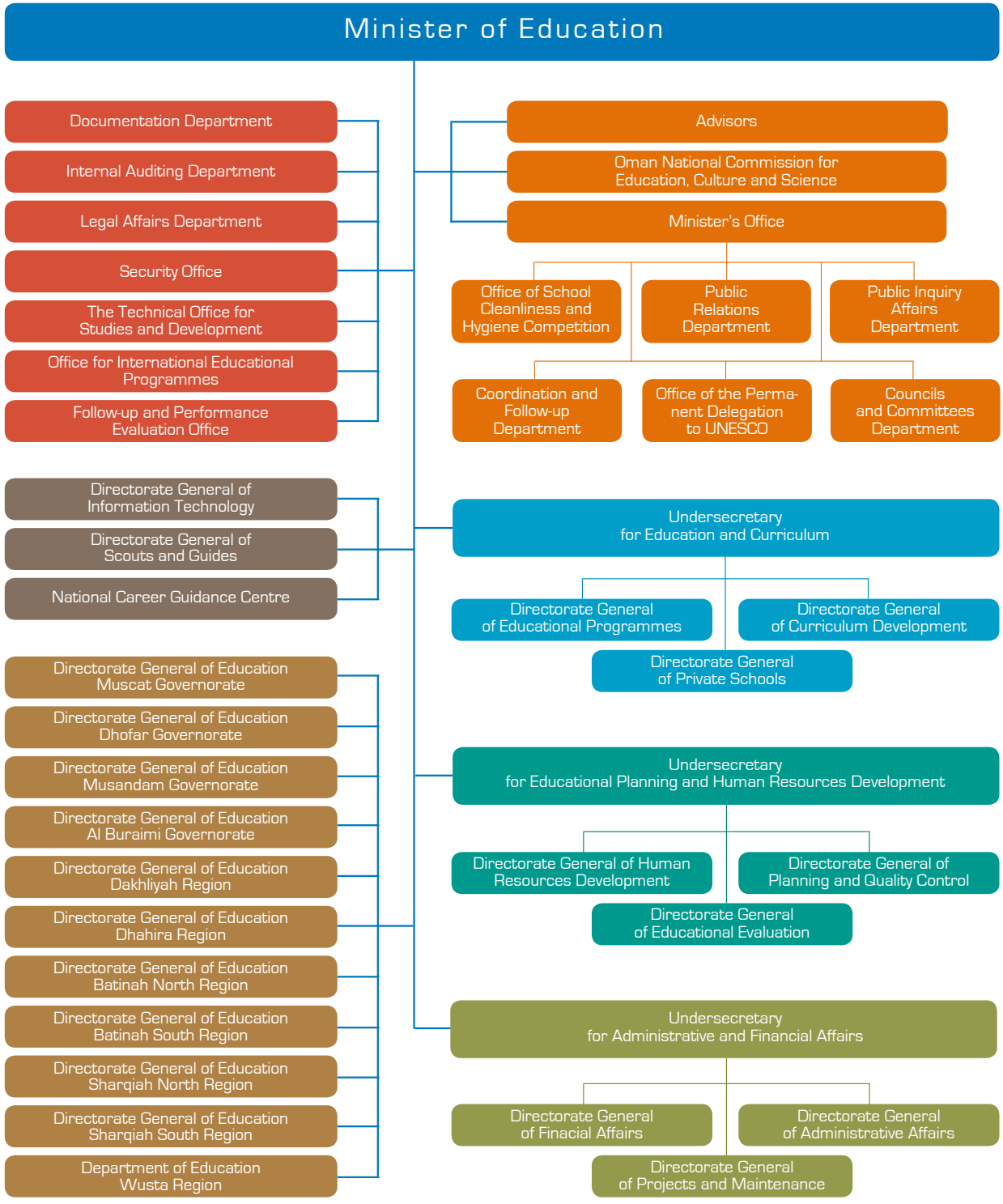
The general terms of reference of the Ministry of Education:

1. Research and suggest the educational and pedagogical policy for school education.
2. Develop the educational programmes in accordance with the philosophy of education and national targets within the public policy of the State.
3. Expand the school education: Basic Education and Post-Basic according to principle of equal opportunities for all citizens in all regions.
4. Provide Literacy programmes and special education for due categories as needed.
5. Encourage private sector to invest in school education and preschool education under the supervision of Ministry of Education.
6. Provide the school buildings with all its requirements and motivate the citizens and private sector to contribute in supporting educational services.
7. Set up draft laws related to schooling and issue executive regulations and decisions.
8. Set the plans and projects for implementing the approved educational policy in light of the requirements of economic, social, scientific and technical development.
9. Specify the bases and general standards for curriculum development taking into account integration of all curricula in all education stages.

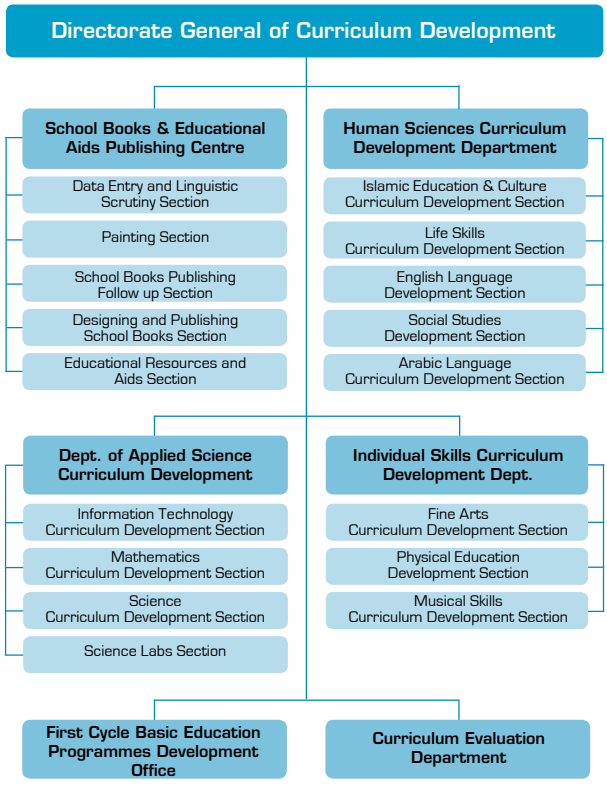
10. Set the teaching and learning standards according to educational updates.
11. Embed the education technologies in school education as per available potentials in order to upgrade the skills of the outcomes within the framework of the Oman digital community project.
12. Develop the educational supervision, school administration, career guidance methods at schools.
12. Determine the qualification and experience needed to apply for the job of teachers and associated jobs.
14. Improve the school administration and specify its roles and responsibilities for the sake of professionalization of education and to insure the quality of education process.
15. Determine the suitable mechanisms to strengthen the school-parents contact.
16. Conduct targeted researches and studies to diagnose the learners' needs and deliver proposals that suit development requirements to improve them.
17. Contribute in documentation of the external cultural relations in education field and represent Oman in the regional and international organizations, symposiums and conferences.
18. Support scouts and guides and activate their programmes.
19. Monitor the education system including all its schools and institutions and provide whatever required to keep it operating effectively.
20. Insure the largest support from the community and media for the development of education.
21. Carry out any competencies pursuant to the laws and Royal Decrees.
22. Set out all rules and regulations to implement the terms of reference.

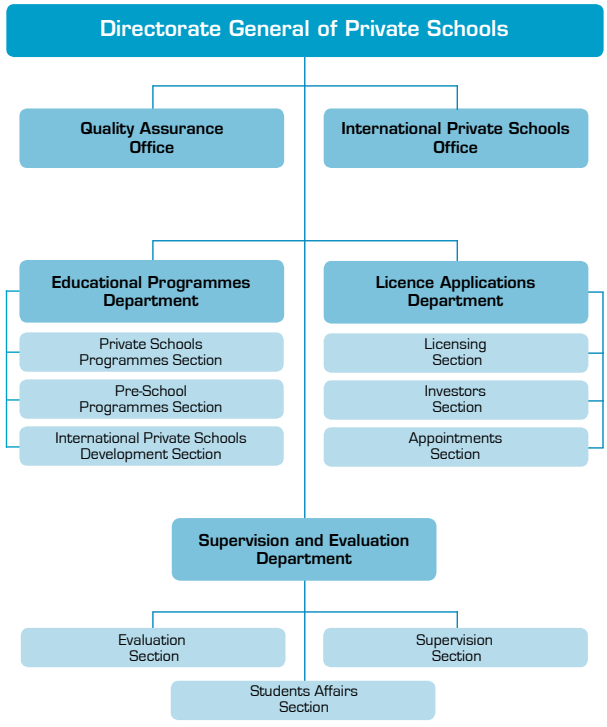
Appendix 5

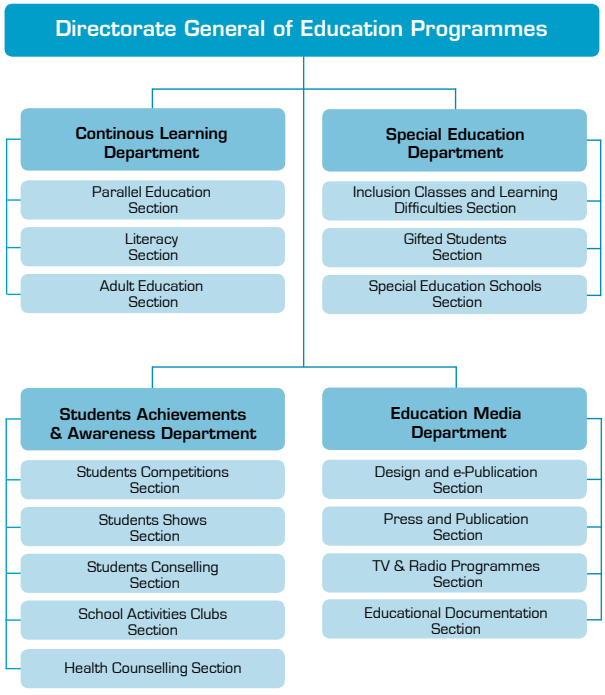
5.1 Ministry of Education Organisational Structure



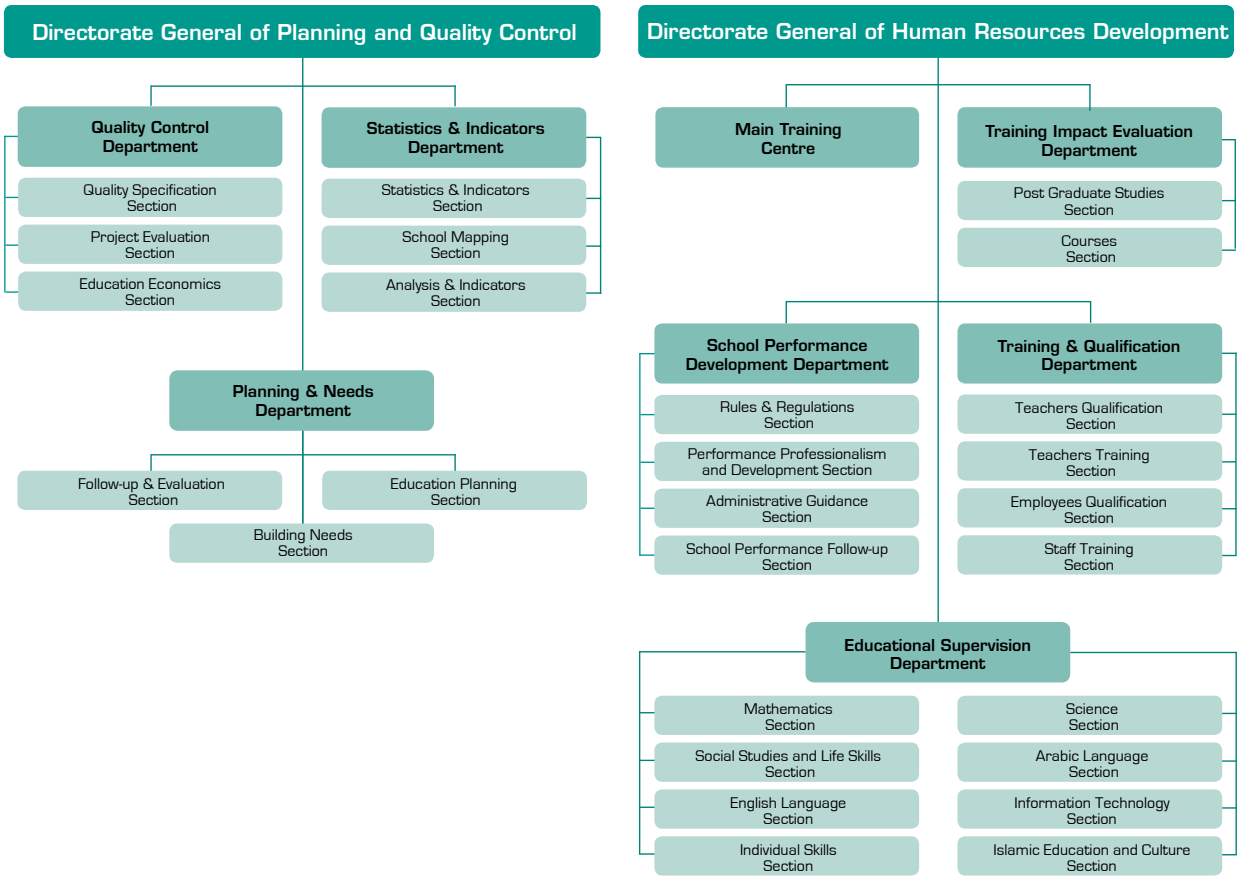
5.2 Education & Curriculum

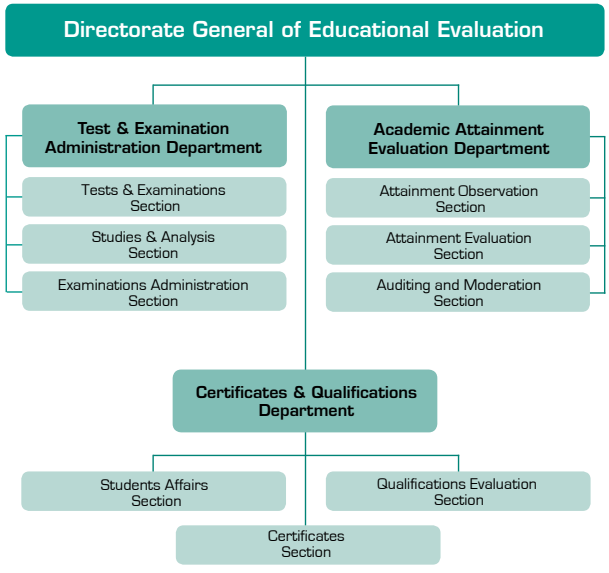




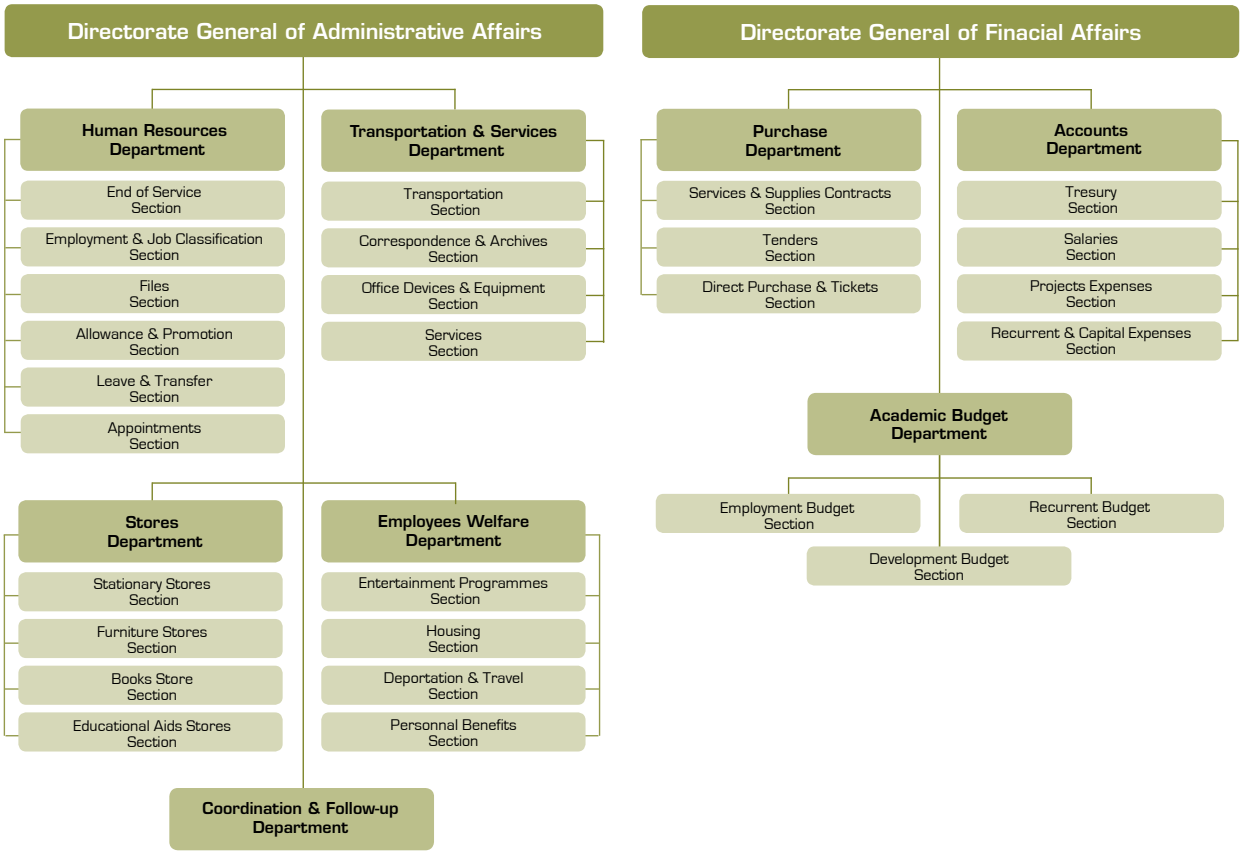


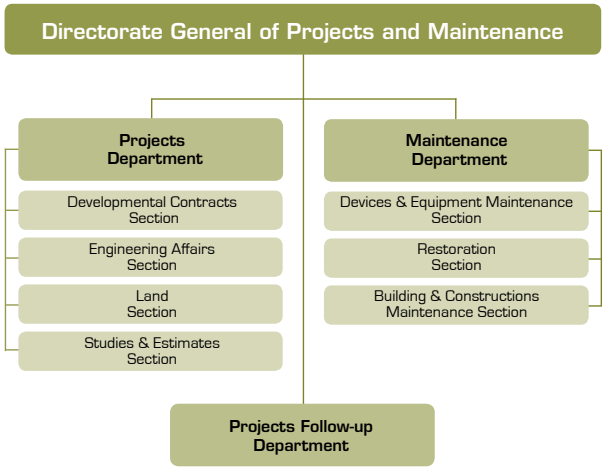
5.3 Planning & Human Resources



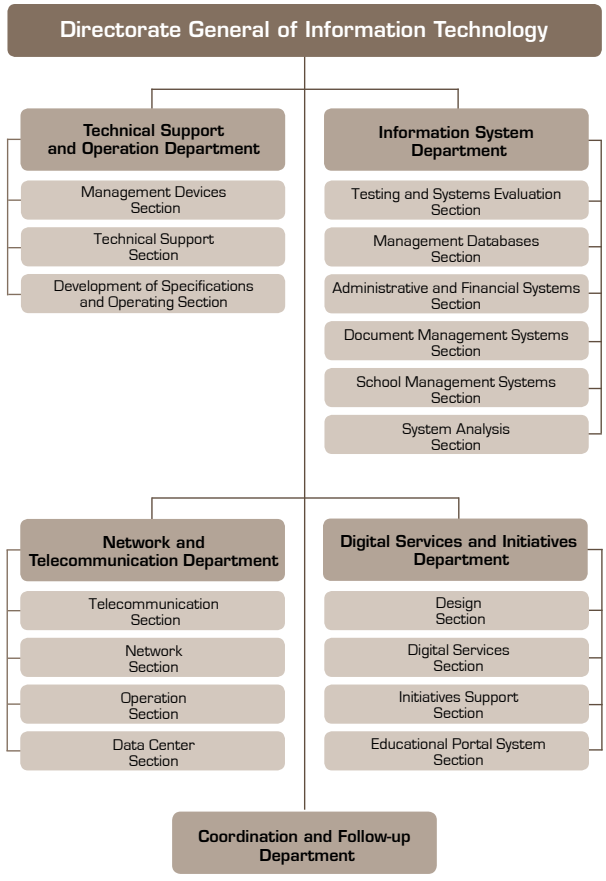


5.4 Administrative & Financial Affairs





5.5 Information Technology



Appendix 6: Country Comparators

Educational World Leaders			
Country	**Educational System**	**Recent reforms**	**Student Attainment**
Hong Kong	Free, but compulsory (6+3+3) plus 3yrs KG. Teacher training carried out at university level. Teacher education institutions also provide in-service training. 20.1% total government expenditure. 3.4 of GDP.	2009/10 reforms following reintegration with China: 9yr to 12yr system + 3KG. Diploma of Senior Secondary education provides entry to variety of educational options: • post-secondary. • vocational. • tertiary. Fewer exams – more continuous and formative assessments. IT Education strategies including: • building IT infrastructure. • empowering learning and teaching using IT. • enhancing the IT environment including encouraging parents to support internet learning. • increasing IT learning resources. • Development of e-textbooks.	PIRLS*: Overall reading average scale score: 571 (#1). TIMSS^: One of top three countries for performance in maths at G4 scale (2011) – 37% students reaching Advanced International Benchmark; 99% reaching LOW International Benchmark (400). G8 - 34% and 97% respectively. 9% of students reached the Advanced International Benchmark in science at G4 and 9% at G8. 96% reached the LOW benchmark (400) at G4 and 95% at G8. PISA+: Ranked #4 performing country in reading, maths and science. Score: 533 (PISA Ave - 493). Literacy rate at 93.5%. (World ranking of 94) in 2012.

Educational World Leaders			
Country	**Educational System**	**Recent reforms**	**Student Attainment**
Singapore	Meritocratic system. Teachers and education valued across all layers of society. The status of teachers is very high. Single national training college for teachers (National Institute of Education (NIE)). Close relationship between NIE, MoE and schools. Teachers training requires an undergraduate degree – BA: Education; BSc: Education. 1yr post-grad Diploma of Teaching. Schools are funded directly through the Ministry of Education. Singapore invests in capacity. Student teachers are paid during their study. There are clear career development pathways for teachers. Actively designs and implements policies to retain good teachers. For example, supporting principals and teachers study to Master degree level. 75% are paid for by scholarship. Every 5th year teachers are paid a retainer for staying in the profession. Centrally controlled. Close control of supply and demand. MoE engages directly with teachers to bring them on board with proposed changes. Local schools – 4 regions – Ministry. All are part of the same systemic entity. Careers start in the schools and work their way through to the Ministry. No active teachers union. Assessment of new teacher's performance after 2 yrs. Conducts focus groups with new teachers to give feedback to improve teacher training.	1979 reforms to open up many alternative pathways for learners based on exam results. Broad curriculum primary school. Leaving Exam determines the school and courses that will be taken at the next level. Express academic (60% students). 4 years. GCE – O-level exam. Normal academic (15%). 5 years. GCE – Normal level exam at the end of the 4th year. GCE – O-level at the end of 5th year. Technical (15%) – 5 year technical path. 2 years Junior College/polytechnic. New option – express students identified as having higher abilities can do integrated secondary and junior college. Some secondary schools specialise in those with particular talents (e.g. sports/art/maths). Some specialised independent schools focus on serving the needs of weaker students (e.g. specific vocational pathways such as mechanical engineering; hospital and retail. Link with industry. There is a Strategic Communications and Engagement Division with direct responsibility for communicating policy to teachers before it is publicly announced. MoE highlights stories of success, especially those schools using excellent process. This has been found to have a direct influence on enrolment trends. Teachers and Principals are posted to schools rather than having a free choice as to where to teach. Strong teacher selection processes through a series of quality gates. Content knowledge is important. Personal attributes for teaching are also highly valued (disposition to teach). Teachers are hired from the top 33% of their cohort. In times of economic pressure – the top 10%. One in every 4 teachers is hired from other fields.	PIRLS: Overall reading average scale score: 567. TIMSS: One of top three countries for performance in Maths at G4 scale (2011) - 43% students reaching Advanced International Benchmark; 99% reaching LOW International Benchmark (400). G8 – 48% and 96% respectively. 33% of students reached the Advanced International Benchmark in science at G4; and 40% at G8. 97% reached the LOW benchmark (400) at G4 and 96% at G8. PISA: Ranked #5 performing country in reading, maths and science. Score: 526 (PISA Ave – 493). Literacy rate at 92.5%. (World ranking of 103) in 2012.

Educational World Leaders			
Country	**Educational System**	**Recent reforms**	**Student Attainment**
South Korea	Free to age 15 (6-3-3). 6yrs compulsory primary. 3yrs compulsory lower secondary. 3yrs senior secondary – not mandatory but reports 97% completion. Tuition fees are charged at this level. Subject specialisation. Centralised funding distribution but regional and local discretion about funding spend. Ministry of Education pays teacher salaries for primary and lower secondary schools. National curriculum revised regularly. Each school has a Council consisting of teachers, parents and prominent community members responsible for reviewing the school management. 7.6% of GDP. 20.8% of total government expenditure. Oversupply of trained teachers creates demand.	2013 – Ministry of Education separated out as an individual department. School-based performance based rewards/bonus system. Teachers incentivised to perform highly – rewards include additional monthly stipend/bonus/study abroad. Increased class sizes and increased schooling hours.	TIMSS: One of top three countries for performance in Maths at G4 scale (2011) – 39% students reaching Advanced International Benchmark; 100% reaching LOW International Benchmark (400). G8 – 47% and 99% respectively. 29% of students reached the Advanced International Benchmark in science at G4 and 24% at G8. 99% reached the LOW benchmark (400) at G4 and 99% at G8. PISA: Ranked #2 performing country in reading, maths and science. Score: 539 (PISA Ave – 493). Literacy rate of 97.9%. (World ranking of 60) in 2012.

Educational World Leaders			
Country	**Educational System**	**Recent reforms**	**Student Attainment**
MIDDLE EAST			
Bahrain Constitutional Monarchy Crown Prince of Bahrain	Free system (6-3-3): • 6yr Primary. • 3yr Intermediate. • 3yr Secular Secondary. Students received supplies, uniforms, meals and transport free. Significant drop out rate (especially for women) after the completion of intermediate. 2.9% of GDP. 11% of total government expenditure.	National Action Charter 2001 introduced compulsory basic education in 2005. Fines were imposed on parents whose children failed to attend. Moving towards specialisation at secondary level: (i) Unified track – science, literary and commercial. (ii) Vocational track – applied/technical vocations. Number of students in higher education tripled in the past decade. Recently introduced four new initiatives: 1. Strengthening the Teaching Profession – improved recruitment, training and employment conditions. 2. Improved secondary vocational education – closer to the needs of the private sector. 3. Establishing Bahrain Polytechnic – courses in industry aligned with applied sciences. Enable qualifications through to degree level. Practical skills reflecting the needs of the job market. 4. Independent Qualifications Authority – inspect schools, secondary vocational institutions and universities; run school level exams. Teachers training college supported by NIE, Singapore.	TIMSS: Country average in Maths significantly lower than centre-point (75) of the LOW G4 (67) and G8 (53) benchmarks (2011). 70% reached the LOW international benchmark in science (400) at G4 and 70% at G8. Literacy rate of 94.6% (world ranking of 85) in 2012 World Economic Forum Global Competitiveness Report (2012/13) ranked Bahrain 35/144 countries for quality of education.

Educational World Leaders			
Country	**Educational System**	**Recent reforms**	**Student Attainment**
Jordan	Free public education (2-10-2). 2yrs pre-school. 10yrs basic education. 2yrs secondary (streamed to either academic or vocational). Graduate with General Certificate of Secondary Education. 30% drop out rate before completing G11. Gender parity at primary level since 1999. Lowest number of young people without a primary education in the GCC. 13.5% of GDP. 6.4% of total government expenditure.	'Education for All' development project since 1999. 2003 – 10-yr programme of reform to grow a knowledge-based economy. Includes: • Improving the physical environment for education. • Promoting early childhood education. • Improving teacher quality. • Strengthening policy; strategic planning; monitoring and evaluation. • Improving teacher employment. • Professional development, and • Improving the curriculum and student assessment. Achieved a 98.2% enrolment rate. Rate of transition to secondary school has increased from 63% (1999) to 97% (2006).	TIMSS: Country average in Maths significantly lower than centre-point of the LOW G4 benchmark (55) in 2011. No G8 information available. No information was available regarding G4 science for Jordan. 72% students reached the LOW benchmark (400) in G8 science. PISA: Ranked #55 performing country in reading, maths and science. Score: 405 (PISA Ave – 493). Literacy rate at 93.4%. (World ranking of 100) in 2012.
Kuwait	Free public education for elementary and intermediate levels. Tuition fees charged for secondary (5-4-3). Segregated by gender from G1. High drop out rates at secondary level. Encourages the use of IT through e-learning. 3.9% of GDP. 13% total government expenditure.	Education Net – a programme to connect all government schools and libraries to a telecommunications data network. 2006/7 – secondary education system being standardised into a single system.	TIMSS: Country average in Maths significantly lower than centre-point (400) of the LOW benchmarks - G4: (30%) and G8: (37%) (2011). No information was available regarding performance in science for Kuwait. Literacy rate at 93.3%. (World ranking of 95) in 2012.

Educational World Leaders			
Country	**Educational System**	**Recent reforms**	**Student Attainment**
Saudi Arabia Highest authority – Supreme Committee for educational policy established in 1963	Primary through to university education open to every Saudi citizen (1-6-3-3). Kindergarten – 1 yr. Primary – 6yrs. Intermediate – 3yrs. Secondary – 3yrs. Mode of teaching primarily traditional rote learning. Women have a marginal role. They can get an education (e.g. Law) but cannot be employed in these fields. Gross enrolment ratio – 36.1% F; 24.7% M – total: 30.2% (World Bank: 2006). Educational spend – 6.8% of GDP. 27.6% of government expenditure.	Strategic plan 2004–2014 – goals and aspirations focused on increase in quality and student achievement. Tatweer reform programme – moving teaching towards analysis and problem solving. Creating a more secular and vocationally based education system.	TIMSS: Country average in Maths significantly lower than centre-point of the LOW G4 benchmark (55%) and G8 (47%) benchmark (2011). 63% of students reached the LOW benchmark for science (400) in G4 and 68% in G8. Literacy rate at 86.6%. (World ranking of 135) in 2012.
Qatar	Free education in public schools. Compulsory at primary level only (6-3-3). 6yrs primary (compulsory). 3yrs pre-preparatory. 3yrs secondary – students can choose to go to general, commercial or technical secondary schools and graduate with a secondary certificate at that level. 7.1% of total government expenditure. 2.42% of GDP.	Introduced K-12 reforms in 2002 – moved to Independent School model whereby parents are offered a variety of schooling alternatives with differing missions, curriculum, pedagogical practices and resource allocation models. Standards based system whereby minimum standards are set for content, curriculum, assessment, and professional development (aligned with standard of best performing countries in the world). Each school has the discretion to meet these standards as they see appropriate. Introduced the collection, analysis and dissemination of education data to the public.	PIRLS: Overall reading average scale score: 425. TIMSS: Country average in Maths significantly lower than centre-point (75) of the LOW G4 (55) and G8 (54) benchmarks (2011). 50% of students reached the LOW benchmark for science (400) in G4 and 58% in G8. PISA: Ranked #61 performing country in reading, maths and science. Score: 372 (PISA Ave = 493). Literacy rate at 96.3%. (World ranking of 74) in 2012.

Educational World Leaders			
Country	**Educational System**	**Recent reforms**	**Student Attainment**
United Arab Emirates	Education is free for citizens through to university level, and is compulsory to Grade 9. Student/teacher ratio is 15:1. Gender segregated from Grade 6 (last year of primary). Primary enrolment – M: 85%; F: 82%. Secondary enrolment – M: 62%; F: 66% . Drop-out rates – between 8–10% at all levels. 25% of total federal government expenditure.	Moving towards active student participation and away from rote learning. Requiring greater quality of teaching methods and curriculum. New School Model – critical thinking oriented curriculum.	PIRLS: Overall reading average scale score: 439. TIMSS: Country average in Maths lower than centre-point of the LOW G4 (64%) and G8 (73%) benchmarks (2011). 61% of students reached the LOW benchmark for science (400) in G4 and 75% in G8. PISA: Ranked #42 performing country in reading, maths and science. Score: 459 (PISA Ave - 493). Literacy rate of 77.9%. (world ranking of 150) in 2012.
Yemen	Universal, compulsory, free education for 6–15 yr olds, but attendance is not enforced. Primary enrolment 81% (74% F). Secondary 46% (30%F). Infrastructure inadequate. Educational materials of poor quality. Too few classrooms. Teaching facilities inadequate. 32.8% of government expenditure in 2000. 9.6% of GDP.	Centralised but disaggregated governance system: Ministry of Education – general education. Ministry of Technical Education and Vocational Training. Ministry of Higher Education and Scientific Research – tertiary.	TIMSS: Country average in Maths significantly lower than centre-point (75) of the LOW G4 (9) and G8 (6) benchmarks (2011). No information was available regarding performance in science for Yemen. Literacy rate at 63.9% (World ranking of 174) in 2012.

PIRLS: International Reading and Literacy Study

TIMSS: Trends in International Maths and Science Study

PISA: Programme of International Student Assessment

Appendix 7: Model of Bureaucracy

The classical model of bureaucracy, developed by the Prussian academic Max Weber in 1922 has the following features:

1. Based on legal rationalism.
2. Routine – orderly, day-to-day execution of duties by a staff of administrators.
3. Hierarchy – articulated division of labour/unified control over staff.
4. Grouped organisation – specialised jurisdictions (e.g. departments/Ministries/Directorates).
5. Impersonal rules, especially those governing recruitment, promotion, dismissal etc.
6. Professional qualifications and knowledge.
7. Officials selected for office, not elected.
8. Salaries related to professional position, not performance.
9. Jobs are for life.
10. Monocratic control.
11. Record keeping is important as the basis for building 'institutional knowledge'.
12. Fixed remuneration – i.e. salaried workers.
13. Official secrecy is important.
14. Promotions are based on the 'next in line', not merit.

Appendix 8: Overview of Data Collection Methods

Quantitative and Qualitative Data Collection Methods – An Overview

Quantitative data collection methods rely on random sampling and structured data collection tools that fit potentially different experiences and responses into predetermined response categories. They produce results that are easy to analyse, summarize, compare, and generalize.

Quantitative research is concerned with testing, supporting or challenging hypotheses resulting from known or perceived positions and/or being able to estimate the size of an occurrence or position of interest.

If the intent is to generalize from the research participants to a larger population, the study will employ probability sampling to select participants.

Typical quantitative data gathering tools include:

- Observing and recording well defined events.
- Obtaining relevant data from management information systems.
- Administering surveys with close-ended questions.
- Experiments/clinical trials.

Interviews

In a quantitative study, interviews are more structured than in qualitative research.

In a **structured interview**, the researcher asks a standard set of questions and nothing more.

In a **semi-structured interview**, the researcher may conduct a more conversational style of interview seeking clarification and prompting for more information or detail from the respondent while still following a question-line theme to ensure that the interview garners the critical information required by the study. It is usual in this scenario to have a pre-prepared interview guide or script that the interviewer works within to ensure that required information is collected within the timeframes allocated. The responses from interviewees are interpreted to fit predetermined response categories for the study to remain quantitative.

Face-to-face interviews have a distinct advantage of enabling the interviewer to establish a rapport with participants and therefore gain their cooperation. These interviews typically yield the highest response rates in studies. They also allow the interviewer to clarify ambiguous answers and, when appropriate, seek follow-up information (refer semi-structured interview paragraph above).

The disadvantages of face-to-face interviews include:

- The travel and human resource expenses when nationally representative samples are required generally limits the sample size to that which is logistically possible.
- They are time-consuming in the above scenario and for the same reasons.
- Social desirability bias can be stronger when doing face-to-face interviews in compliant or highly respectful cultures.

Computer Assisted Personal Interviewing (CAPI): is a form of personal interviewing, but instead of completing a questionnaire the interviewer brings along a laptop or hand-held computer to enter the information directly into a database. This method speeds up the time involved from data collection to analysis as well as saving the interviewer from carrying hundreds of questionnaires. However, this type of data collection method can be expensive to set up and requires that interviewers have computer skills.

Surveys

Paper-pencil surveys can be sent to a large number of people and saves study time and money. There are few barriers to participation in a paper-pencil survey. No technical skills or technology requirements are necessary and literacy requirements are generally limited to reading the question and placing a tick against the desired response. People are generally more truthful while responding to these surveys regarding potentially controversial issues in particular due to the fact that their responses are anonymous. The disadvantages of this study tool are:

- This tool requires a high level of monitoring to get satisfactory return rates. If left to self-motivation the return rates of the survey are very low
- If the return of the surveys is not monitored, the representation of respondents is biased toward highly motivated people which is not representative of the general population.

Web-based surveys are a more recent and inevitably growing tool as the use of the internet becomes increasingly ubiquitous. Undertaking a survey of this kind would mean respondents receiving a URL address that would take them to a secure website to complete a questionnaire. Questionnaires often make use of checklist and rating scales. These devices help simplify and quantify people's behaviours, feelings and attitudes. A checklist is a list of behaviours, feelings attitudes or characteristics that the study is looking for. The survey participant simply checks whether each item on the list is observed, felt, present or true or conversely, the opposite of each. A rating scale is more useful when behaviour or attitude needs to be evaluated on a continuum. These are often known as Likert scales.

The disadvantages of this method can include:

- The exclusion of people who do not have a computer or are unable to access a computer.
- Inaccurate results from people with limited computer skills.
- The reliance on good internet connectivity.
- A tendency for people to select 'middle of the road' responses. E.g. Selecting number 3 on a 1 to 5 scale.
- Potentially inaccurate responses from respondents disengaged from the survey. E.g. indicating a response without reading the question to speed up completion.

Different tactics are employed to identify or avoid the above challenges during the design stage of these surveys.

Qualitative data collection methods play an important role in impact evaluation by providing information useful to understanding the processes or systems behind observed results and assessing people's perceptions of their position or place in a system. Furthermore, qualitative methods can be used to improve the quality of analysis of survey-based quantitative evaluations by: helping generate evaluation hypothesis; strengthening the design of survey questionnaires; and expanding or clarifying quantitative evaluation findings. These tools are characterized by the following attributes:

- They tend to be open-ended and have less structured protocols (i.e. researchers may change the data collection strategy by adding, refining, or dropping techniques or respondents).
- They rely more heavily on interactive interviews; respondents may be interviewed several times to follow up on a particular issue, clarify concepts or check the reliability of data.
- They use triangulation to increase the credibility of their findings (i.e. researchers rely on multiple data collection methods to check the authenticity of their results).
- Generally their findings are not able to be generalized to any specific population, rather, each case study produces a single piece of evidence that can be used to seek general patterns among different studies of the same issue.

Regardless of the kinds of data involved, data collection in a qualitative study takes a great deal of time. The study needs to record any potentially useful data thoroughly, accurately and systematically using notes, diagrams, audio, photographs and other suitable means. The data collection methods must observe the ethical principles of research.

The qualitative methods most commonly used in evaluation can be classified in three broad categories:

- In-depth interviews.
- Observation methods.
- Document reviews.

Many of the concepts expressed in this appendix are derived from:

"Practical Research: Planning and Design", Leedy and Ormrod, N.J Merrill Prentice Hall, 2001

Appendix 9: References

Oman Education Publications and Ministry Documents

A

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Appendix 10: Draft Role Definition Director Communications, Ministry of Education

Business unit	**Communications**
Reports to	Minister of Education
Direct reports	Five Direct Reports: • Communications Executive (digital, web, social media, e-marketing). • Communications Executive (media, stakeholders, internal and events). • Communications Co-ordinator. • Editor. • Design and Production Manager.
Purpose of position	This position develops and manages the Ministry's public profile and brand reputation by leading, implementing and managing compelling public relations and communications strategies and programmes to media and key stakeholders. The role works closely with the Minister, members of the Executive Management Team (EMT) and other key managers in the Ministry.

Key accountabilities

Manage Communications Strategies and Activities

- Develop communications strategies and plans and provide input into strategic and operational plans for the Ministry to ensure the achievement of the Ministry's profile, visibility and stakeholder targets.
- Manage relevant human and physical resources for the achievement of strategic and operational communications objectives.
- Project manages specific activities as required including collaboration with international bodies, visitors and local events.
- Manage the production of key publications.
- Lead the delivery of timely and relevant communications for the Ministry that results in achievement of core objectives and the Ministry's business plan.
- Develop clear and insightful change management strategies and plans.
- Develop robust issues management plans to help the Ministry manage risk.
- Provide reactive communications advice and leadership in the event of negative issues in the media.

Public Relations

- Lead the Ministry's strategic approach to news media seeking to achieve greater brand profile and an enhanced reputation.
- Develop and report on the Ministry's media and PR plan with focus on detailed objectives, strategies, audiences and key messages.
- Develop proactive PR campaigns to enhance the reputation of the Minister, the Ministry and its activities, and the profile of the Minister and the Ministry, with stakeholders.
- Ensure activity and messages are targeted and campaigns are carefully planned to maximise coverage.
- Develop effective media releases and materials and presentations and events. Formulate or facilitate commentary from experts to drive media coverage. Create tactical profile opportunities, for example columns. Brief news media, pitch stories and act as spokesperson if required.
- Develop repositories of information and ensure clear policy views are in place for media campaigns and spokespeople.
- Ensure media contacts are up to date.
- Develop a PR/Communications response to emerging issues and/or risks for the Minister and the Ministry; and manage issues as required ensuring media strategy, key messages and Q&A are in place.
- Develop PR campaigns as required.
- Manage the Ministry's relationship, if any, with its Public Relations agency.

Communications – e-marketing, Newsletters, Social Media, Digital Strategy and Website:

- Lead continuous improvement and modernization of the Ministry's internal and external communications and channels, reporting content development to the appropriate advisory group.
- Communicate the Ministry's strategy to relevant audiences as required.
- Provide input into strategy and plans for digital, website and e-marketing as part of the business plan.
- Lead the social media strategy for the Ministry and implement so that the organization grows its profile with target groups, in particular students.
- Ensure the Communications Team delivers all communications and newsletters within the required communications framework, ensuring best practice content, style guides and electronic channels to grow brand equity and the reputation of the Ministry and ensure audiences have relevant and targeted information.
- Ensure the team leads content development for electronic and printed newsletters, seeking content from relevant Divisions and writing and editing copy as required.
- Ensure the team advises staff and assists to deliver coordinated communication campaigns and activity to meet business objectives, utilizing relevant media, and writing copy if required. Ensure reporting is in place to measure results.
- Manage the content and updating of the Ministry's website.
- Incorporate feedback loops and regular review of campaign/service performance with internal stakeholders.
- Support the Editor and team to deliver high quality compelling publications each year.

Internal Communications

- In conjunction with the Minister and HR, develop strategies, plans and forums for effective internal communication, assisting to drive a positive organizational culture and values.
- Draft key messages and presentations for the Minister to deliver, with Q&A, where required.
- Manage the content and updating of the intranet site, including Ministerial postings if required.

Effective Team Leadership:

- Provide leadership by identifying needs and plans for Communications Team members' development, mentoring, coaching, and change management. Develop and grow a high performing team.
- Lead by example, portraying management styles, behaviors and desired competencies.
- Ensure that effective people capability systems are maximized and are within the legal requirements including regular performance reviews and feedback, training, personal development, coaching, mentoring, feedback and leadership.
- Build a strong communication link to all staff through respect, trust and confidence. Encourage strong interdivisional interaction.
- Provide and build a positive team culture that encourages staff to work cooperatively in a challenging, empathetic, thinking and learning environment.
- Ensure staff meet required policies and Code of Conduct.
- Provide and encourage a safe and healthy work environment.

Effective Financial Planning and Management

- Provide input into strategy development and annual Business Plan.
- Manage the financials and budgetary requirements for the Communications Team.

Interpersonal Relationships

- Quality contribution to the Minister and Executive Management Team by developing and fostering cross-Divisional relationships as appropriate, including:
  - Communication with and influencing senior managers to ensure the best interests of the Ministry are maintained.
  - Effective communication with senior managers on the expectations of the Minister in relation to communications to ensure best practice is performed at all times.
- Ensure the Minister is advised on communications opportunities and issues likely to impact on the organization, and that strategies and plans to deal with these are developed.

Person specification:

Technical

- Extensive experience in managing communications, PR and stakeholder relations.
- Excellent relationship management skills with internal managers and external stakeholders, including media.
- Able to network at Ministerial, CEO and Board level.
- Tertiary qualification majoring in Marketing or Communications, or an equivalent journalism qualification, or significant experience in relevant roles.
- In-depth experience and knowledge of:
  - Strategic communications development and implementation.
  - Communication channels, including electronic delivery, the web and social marketing.
  - Publishing processes.
  - Project management practices and techniques.
  - Policy-setting processes.
- Journalistic, editorial and proofreading skills.
- Speech-writing skills.
- Strong talent for writing concise and well-targeted material.

Core Competencies:

- Strong leader and manager of staff, across the organization up to Ministerial level.
- Proven conceptual, analytical and strategic thinking skills.
- Excellent negotiation and influencing skills.
- Intellectual capacity to analyze and provide balanced coherent advice on a range of complex issues.

Role Specific Competencies:

- Able to manage issues and advocate a position for the Ministry.

Personal:

- Operate at a senior level while undertaking hands-on tasks.
- Provide strategic leadership to staff in area of expertise.
- Act as a leader, role model and a superb team player.
- Demonstrate excellent listening skills and attention to detail.
- Be highly delivery-oriented and results-focussed.
- Manage multiple priorities and work to internal and externally imposed deadlines.
- Develop effective working relationships – internal and external.
- Develop quality processes and products.
- Have a sense of humour and fun; be self-aware.
- Show professionalism in all actions.

Job dimensions:	**Financial/budget** • Communications and PR Budget. **Direct reports** • Communications Executive (digital, web, social media, e-marketing). • Communications Executive (media, stakeholders, internal and events). • Communications Co-ordinator. • Editor. • Design and Production Manager. **Total reports** • Five.
Job environment:	The role services the needs of the Minister and requires consultation with all areas of the Ministry to ensure that a consistent, consultative leadership approach is provided, particularly with other Divisions.

Appendix 11: Draft Policy Paper Template

Office of the Minister of Education

Title – the title of the paper should clearly and succinctly reference the policy issue being addressed.

E.G: Amendments to the Education Act to improve employment conditions for teachers.

Proposal

The proposal should summarize the decision that the Minister or Cabinet are being asked to approve or agree to.

Executive Summary

If a paper is long or complex, an executive summary that clearly and succinctly articulates the key issues and proposed policy response should be included in the paper.

Background

Background information should be provided that includes:

- **Motivation for the policy paper (is it addressing a particular issue; responding to a direction from the Minister of Education; prompted by strategic objectives?).**
- **Reference relevant background information such as previous policy developments and settings (when they were introduced, and referencing the relevant Ministerial or Royal Decree), and the observed outcomes of previous policy settings.**
- **Summarize how a policy may have evolved.**

Comment

The Comment section should include important information that will help the Minister and Cabinet to understand relevant detail relating to the proposal.

The comment section should 'make the case' for the proposed policy change, in simple, clear and easy-to-understand language.

The comment section should also include a narrative about alternative options that were considered, and why the recommended policy proposal is the preferred choice.

Stakeholder Implications

New policy initiatives should be consulted on with key interested agencies. For the Ministry of Education, consultation with the Ministry of Finance, Ministry of Manpower and Ministry of Higher Education should become standard practice, to ensure a 'joined-up' approach to policy development.

Financial Implications

Financial implications should be clearly set out, and include comment about the sustainability of any fiscal implications, commentary on any necessary shifts in Budget to meet the costs of policy changes, and adhere to International Finance Reporting Standards and Oman Ministry of Finance guidelines.

Legislative Implications

Previous Royal and Ministerial decrees should be summarised in this section, and the Decree Number referenced.

If the new decree will supercede a previous decree, this should be made clear.

Regulatory Impact

The regulatory impact section should articulate the anticipated impacts, both positive and negative, of a new policy. It should articulate how the new policy meets relevant decision-making criteria and outline how any perceived risks will be managed.

Communication

The communication section should clearly articulate how the policy will be communicated publicly.

Recommendations

The recommendations should be clear, represent a single decision point, and flow logically from the content of the paper.

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Evaluation of the Sultanate of Oman Education System

(Grades 1-12)

Under the reign of His Majesty Sultan Qaboos bin Said, the Sultanate of Oman has transformed its education system over the last 45 years. High levels of public investment have enabled a rapid expansion in school buildings across Oman and a significant growth in the education labour force. As a result, almost universal access to Basic Education has been achieved, and almost all students progress onto Post-Basic Education.

The efforts to provide accessibility of education for all are now being matched with investment to deliver a quality education for all. To assist it in this quest, the Ministry of Education, in cooperation with a New Zealand Education Consortium, launched a comprehensive review of the Sultanate of Oman's school education system in January 2013. Working with a technical team from the Ministry, the New Zealand Consortium was provided with access to all areas of the school education system, from the classroom to the Minister's Office, and collected wide-ranging data from a broad range of stakeholders.

The '*Evaluation of the Education System (Grades 1-12)*' report offers an independent analysis of the components of Oman's current school education system and identifies its key drivers. It provides important insights on the type of system-level responses required for improved student learning, and on how the Ministry can chart a sustainable way forward towards developing a high-performing school education system.

Jointly prepared by the
Ministry of Education and the
New Zealand Education Consortium

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