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مركز القياس والتقويم التربوي
The Center for Educational Assessment
and Measurement (CEAM)



سلطنة عُمان
وزارة التربية والتعليم

Assessment Document of Students' Learning in Information and Communication Technology (ICT) Grades (11-12) - Bilingual Program



August 2024

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Introduction

Assessment is a crucial component of the educational process, serving as a mechanism to evaluate the effectiveness of instructional strategies and to ensure the attainment of educational objectives. It provides valuable insights into the strengths and areas for improvement within the educational framework, thus enabling continuous enhancement and development of the learning experience.

This document serves as a comprehensive guide for implementing continuous assessment (CA) for grades 11 and 12. It offers a brief theoretical overview of continuous assessment and it describes how each CA tool can be administered to effectively measure and monitor student's achievement in IT. It also provides details about the format and specifications of the final exam.

By adhering to the guidelines outlined in this document, teachers will be equipped to enhance their assessment practices, thereby supporting student development and achieving educational goals with greater efficacy.

Important Terms

1

Continuous Assessment

The process of assessing students' performance by the teacher on an ongoing basis throughout the subject, by using a variety of assessment tools. Its purpose is to monitor and support students' learning and to offer a more nuanced and equitable representation of students' achievement. Continuous assessment covers a wide range of activities depending on the assessment purpose, which may be formative or summative

2

Formative Assessment

The process of assessing student's learning during the instructional process, typically done by providing continuous feedback to the student. It's intended to help students and teachers adjust teaching and learning strategies in real-time to enhance students' achievement of the learning goals.

3

Summative Assessment

The process of evaluating, measuring, and reporting student's learning in the subject at the end of the semester or the year. Its primary function is to document students' knowledge and skills, typically by awarding grades and marks, and reporting these grades to the parents and the ministry.

Assessment Objectives

When achieving learning goals and objectives in ICT, students will be able to meet assessment goals, which can be categorized into three groups: knowledge and understanding (AO1), application (AO2), and reasoning (AO3). These objectives represent the fundamental skills that students are expected to acquire through studying the course and serve as the basis for assessing students' performance in ICT.

AO1: Knowledge and Understanding

It means the student's ability to recall, recognize, and comprehend information. This objective focuses on a student's capacity to demonstrate knowledge of key concepts, facts, theories, and principles related to a subject area. It also involves understanding the meaning and significance of this information, being able to explain it clearly, and showing awareness of how it fits into broader contexts.



AO1 Command Words

AO2: Application

It means the student's ability to use knowledge and understanding of ICT concepts in new or unfamiliar contexts. This assessment objective tests a student's ability to apply learned concepts, theories, and principles to solve problems or address tasks in real-world situations. It requires transferring what they know to different scenarios, demonstrating their ability to think critically and creatively within the subject area.



AO2 Command Words

AO3: Reasoning

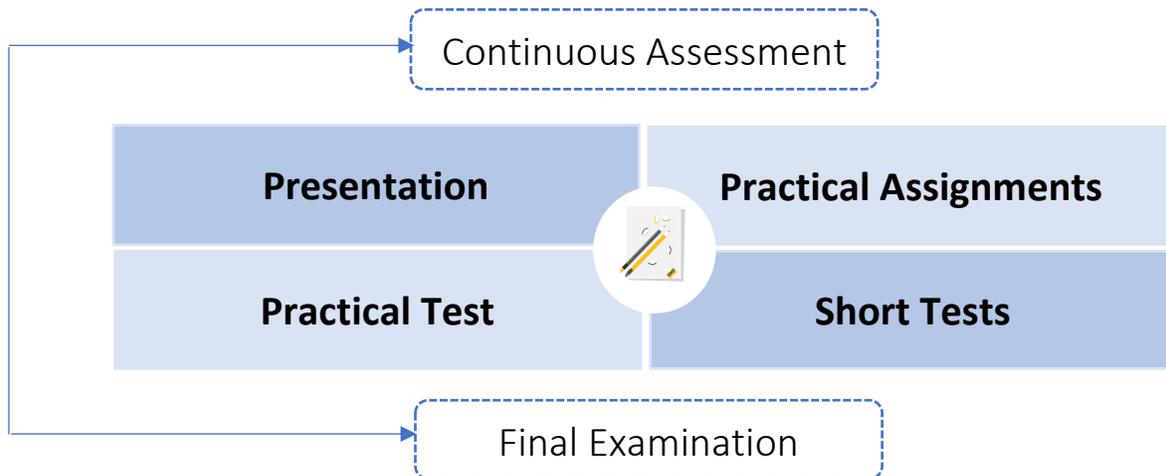
It involves breaking down complex information into its component parts, examining relationships, patterns, and trends, and making informed judgments. This objective requires students to critically analyze ICT concepts, data, arguments, or situations and evaluate their significance or validity. It also includes synthesizing information, forming reasoned conclusions, and providing evidence-based judgments.



AO3 Command Words

Assessment Tools

The assessment of ICT subject comprises two primary components: Continuous Assessments (CA) and a Final Examination:



Each semester follows a grading scheme wherein Continuous Assessment contributes 60% to the overall score, while the Final Examination carries a weightage of 40%. Student performance is evaluated through the allocation of marks, with a maximum limit of 100 marks. These marks are recorded at the end of each semester. The following table represents the relative weight of each assessment tool and provide an overview of the assessment structure for each semester for both grades (11 and 12):

Assessment	No. per semester	Type	Total marks	Weight	Total Weight
Presentation (maximum of 1)	1	Continuous Assessment (CA)	10	10 %	60%
Practical Assignment	1		20	20%	
Practical Test	1		10	10%	
Short Tests	2		20	20%	
Final Exam	1	Final Examination	40	40%	40%

Designing an Effective CA Activity

When designing Continuous Assessment Activities (CAA), teachers have flexibility in creating assessment tasks for their students. However, it is important to adhere to the following guidelines:



1

Alignment with Assessment Objectives: The activity set should provide students with the opportunity to address the Assessment Objectives, and it should clearly indicate which Assessment Objectives are being assessed (Knowledge, Analysis, Application, or Evaluation).

2

Written Response Requirement: The activity must necessitate a written response from the student. Oral responses alone are not acceptable as a standalone form of assessment.

3

A deadline for completion should be provided to students: submissions beyond the deadline should not be accepted unless there are exceptional circumstances at the discretion of the teacher. Deadlines should provide all students with ample opportunity to complete the tasks.

4

Complexity and Reflecting Thinking Skills: The complexity of the activity, as well as the level of thinking skills required from students, should align with the corresponding learning outcome and assessment objectives. Assessment activities should be designed in a manner that reflects the specific Assessment Objectives they are intended to assess.

Description of CA Tools

Presentation

- The presentation carries a weightage of 10 marks.
- The Presentations MAY be completed in small groups (maximum of 4 students collaborate and present together) or individually.
- Teacher **MUST** clearly communicate the presentation requirements, including the content, format, time limits, and evaluation criteria to ensure that students understand what is expected of them.
- The teacher **MUST** use and share a clear assessment rubric that outlines the criteria for evaluating the presentations. The use of rubric will enable teachers to provide constructive feedback to students, highlighting strengths and areas for improvement, and encouraging self-reflection and peer feedback to enhance learning.
- An example of an assessment rubric is included in **Appendix 1** for reference. Teachers have the option to either utilize or adapt this provided rubric or develop their own based on their specific requirements and preferences.
- Students **MUST** cite external sources of information – making it explicitly clear where they have included the work of others using in-text citations. Citations must also be accompanied by a full, detailed reference within the document, and full references for the sources they have used including (Author/Source, Title, Publisher, Date/Year of Publication).
- It is **MANDATORY** for the student portfolio to include the assessment rubric that was used to evaluate the student's performance, along with the assigned mark. Additionally, the portfolio must contain a written response for the presentation, which should be in the form of a printed presentation created using tools like PowerPoint, Google Slides, Apple Keynote, or any other appropriate platform. This written response, serving as evidence of the student's work, will be submitted for moderation purposes.

Group-presentation and grading:

- Clearly communicate to students that their work will be monitored, and teachers have the authority to assign different grades to students based on their level of contribution to the group task.
- Facilitate the equitable distribution of tasks among group members, ensuring that each student has a fair share of responsibilities.
- Observe students actively engaging during the presentation and specifically during his/her turn, taking note of their contributions and involvement, and grade students accordingly based on their level of engagement.
- Provide warning to students who are not actively participating in the group presentation, emphasizing that their grade may be affected if this behavior persists.

Description of CA Tools (Continued)

Practical Assignment

The practical assignment is a task that requires students to use and apply their knowledge, understanding and skills in a practical or hands-on manner. It involves the completion of a specific set of tasks, which may include problem-solving, experimentation, programming, designing, or any other practical application related to the subject. The following are some guidelines for teachers:

- The practical assignment carries a weightage of 20 marks.
- It **MUST** be completed Individually.
- It may be completed in the classroom or at home.
- The teacher **MUST** provide clear instructions and requirements for the practical assignment, including the specific tasks, deliverables, technical specifications, and evaluation criteria. This ensures that students have a thorough understanding of what is expected of them.
- The teacher **MUST** use an assessment rubric that clearly outlines the criteria for evaluating all specific tasks. The rubric may cover aspects such as technical proficiency, problem-solving skills, creativity, and documentation or any other aspects based on teacher requirements and preferences. The use of a rubric facilitates consistent and fair assessment.
- Students **MUST** cite external sources of information – making it explicitly clear where they have included the work of others using in-text citations. Citations must also be accompanied by a full, detailed reference within the document, and full references for the sources they have used including (Author/Source, Title, Publisher, Date/Year of Publication).
- It is **MANDATORY** for the student portfolio to include the assessment rubric that was used to evaluate the student's performance, along with the assigned mark. Additionally, the portfolio must contain a written response for the practical assignment which can be in the form of a written/typed assignment document or screenshots of student product. This written response, serving as evidence of the student's work, will be submitted for moderation purposes.

Description of CA Tools (Continued)

Practical Test

A practical test is an assessment method that focuses on evaluating students' practical skills and competencies in a controlled testing environment. It involves a predefined set of tasks or activities that students must complete within a specific time frame.

- The practical test carries a weightage of 10 marks.
- It **MUST** be completed Individually.
- The practical test **MUST** be completed in the classroom.
- The teacher **MUST** provide clear instructions and requirements for the practical test, including the specific tasks, technical specifications, and assessment criteria. This ensures that students have a thorough understanding of what is expected of them.
- During the administration of practical tests, the teacher **MUST** employ a set of proactive measures to prevent instances of cheating, to ensure the integrity of practical tests and maintain a fair assessment environment.
- The teacher **MUST** use an assessment rubric that clearly outlines the criteria for evaluating all specific tasks.
- It is **MANDATORY** for the student portfolio to include the assessment rubric that was used to assess the student's performance, along with the assigned mark. Additionally, the portfolio must contain a written response for the practical assignment which can be in the form of a written/typed assignment document or screenshots of student work. This written response, serving as evidence of the student's work, will be submitted for moderation purposes.

Description of CA Tools (Continued)

Short Tests

The following guidelines should be adhered to when conducting short tests:

- **TWO** short tests **MUST** be administered; each one carries a weightage of 10 marks.
- Short tests should be completed individually by students and not in groups.
- IT **MUST** not be 'open book' activities where students have access to class notes or textbooks.
- Teacher supervision is **MANDATORY** during the completion of short tests to ensure fairness and maintain the integrity of the assessment process.
- Short tests should be designed to assess each of the four Assessment Objectives: Knowledge, Application, Analysis, and Evaluation. This ensures a comprehensive assessment of students' understanding and skills in various aspects of the subject matter.
- It is **MANDATORY** for the student portfolio to include the student's short test paper along with the assigned mark. This paper serving as evidence of the student's grade, will be submitted for moderation purposes.

Short Tests Specifications (Grades 11 and 12)

Question Types

Question	Question Type		Percentage	No. of items	Marks
Q1	Multiple Choice Question (MCQ)		20%	2 to 4	2
Q2	Extended Response	Short Answer	80%	2 to 4	4
		Long Answer or Scenario-Based		1	4
Total			100%	5 to 9	10
Time: 30 to 45 minutes Teachers must prepare a clear answers scheme for each test where the AO and the mark are specified for each items.					

- Each Multiple-Choice item MUST worth from 0.5 to 1 marks only.
- For short answer items, the number of marks per item MUST be from 1 to 3 marks only.
- For extended response Items, the number of marks per item MUST be from 4 marks.
- The teacher can use a scenario-based item in place of the long answer item. This item MUST contain a short scenario that focus on the learning outcomes that are to be assessed. And the scenario must be followed by 2 to 3 short answer questions, each worths from 1 to 2 marks.

AO Requirements

AO	AO1	AO2	AO3	Total
Weight	40 %	40%	20%	100%
Marks	4	4	2	10

Feedback on CAAs

Providing effective feedback is one of the most effective methods of helping students improve their marks. It is essential as part of the learning process that students receive feedback on both areas they are performing well in and in areas they need to improve.

When it comes to continually assessed activities, it is important for teachers to refrain from using mock formative assessments. Instead, ongoing feedback should be provided as students work on the summative assessment activity. This type of feedback requires teachers to exercise their professional judgment, guiding students towards identifying areas for improvement without simply providing the information they need to boost their grades.

To achieve this, teachers can employ questioning strategies that encourage students to reflect on their work and discover where important information may be missing or incorrect. By engaging students in this process, they are equipped with the necessary knowledge and skills to take responsibility for their learning and make necessary adjustments.

Re-submission of CAAs

The re-submission or re-sitting of continuous assessment activities should generally **NOT** be permitted for students. This ensures the consistency and fairness of the assessment process. However, in exceptional circumstances, such as prolonged authorized absence or significant medical conditions, students may be granted the opportunity to re-submit activities, subject to the approval of the teacher. It is important to note that re-submission or re-sitting should not be allowed solely for the purpose of raising grades unless valid exceptional circumstances apply. This policy ensures the integrity of the assessment process and ensures that grades reflect the students' genuine performance and understanding.

Student's Portfolio

Teachers are required to maintain a comprehensive portfolio for each student, containing all assessments undertaken throughout the semester. It is very important that this portfolio is diligently compiled and maintained, ensuring that the included work is original and not copies. The primary objective of the portfolio is to facilitate the moderation process, thereby ensuring the integrity, reliability and quality of the marking and grading procedures. To achieve this, every Continuous Assessment Activity (CAA) must be accompanied by a front page clearly indicating the awarded mark. Moreover, the portfolio should contain the student's cumulative assessment record, meticulously documenting all assessment activities within the portfolio, along with their respective marks, as well as the final computation of the cumulative marks awarded to the student.

Moderation (Grade 12)

Moderation refers to the process of ensuring that continuous assessment tools are applied correctly and that the marks awarded to students are credible, based on the technical standards and specifications outlined in the student learning assessment documents.

Students' grades and academic work in grade 12 will be moderated by MOE staff at the end of each semester. Teachers should prepare students' portfolios and keep recording and documenting students' achievement in CAAs in the portfolio as described in the previous section.

Important note: To maintain consistency in grading, teachers are expected to exercise their professional judgement when assessing both continuous assessments and examinations.

Final Examination (Grade 11 and 12)

Examination Format

- One formal examination will be prepared and set at the end of each semester; this examination carries a weightage of 40 marks of the assessment for each semester.
- Grade 12 final exam to be prepared **CENTRALLY** and to be held at ministry of education Exam centers.
- Teachers are responsible for preparing & setting the examination paper based on the Unit Content and Learning Outcomes for grades 11.
- For grade 11, the duration of the final exam to be between 2 – 3 hours. For grade 12, the duration will be 3 hours.

Question Types

Question	Question Type		Percentage	Marks	Total Marks	
Q1	Multiple Choice Question (MCQ)		20%	8	8	
Q2	Extended Response	Short Response	80%	45%	18	32
		Long Response		20%	8	
		Scenario-based		15%	6	
Total			100%	40	40	

- Each Multiple-Choice Question **MUST** worth one mark only.
- For short answer items, the number of marks per item **MUST** be from 1 to 3 marks only.
- For extended response items, the number of marks per item **MUST** be from 4 to 6 marks only.
- For the scenario-based item, It **MUST** contain a real-world scenario that focus on the learning outcomes that are to be assessed. And the scenario must be followed by 2 to 4 short answer questions, each worths from 1 to 3 marks.

AO Requirements

AO	AO1	AO2	AO3	Total
Weight	40 %	40%	20%	100%
Marks	16	16	8	40

Final Exam Specifications (Grade 11)

First Semester

Unit	Weights	Multiple Choice		Extended Response						Assessment Objective			Total
				Short Answer		Long Answer		Scenario Based					
		No. of Items	Mark	No. of Items	Mark	No. of Items	Mark	No. of Items	Mark	Ao1 40%	Ao2 40%	Ao3 20%	
Data processing and Information	60%	5	5	8-14	11	1	4	2	4	10	10	5	24
Monitoring and Control	40%	3	3		7	1	4	1	2	6	6	3	16
Total	100%	8	8	8-14	18	2	8	3	6	16	14	8	40

Second Semester

Unit	Weights	Multiple Choice		Extended Response						Assessment Objective			Total
				Short Answer		Long Answer		Scenario Based					
		No. of Items	Mark	No. of Items	Mark	No. of Items	Mark	No. of Items	Mark	Ao1 40%	Ao2 40%	Ao3 20%	
e-security	37%	3	3	8-14	8	1	4	-	-	6	6	3	15
Digital Divide	33%	3	3		6	1	4	-	-	5	5	3	13
Expert System	30%	2	2		4	-	-	2-3	6	5	5	2	12
Total	100%	8	8	8-14	18	2	8	2-3	6	16	16	8	40

Final Exam Specifications (Grade 12)

First Semester

Unit	Weights	Multiple Choice		Short Answer		Long Answer		Scenario Based		Assessment Objective			Total
		No. of Items	Mark	No. of Items	Mark	No. of Items	Mark	No. of Items	Mark	Ao1 40%	Ao2 40%	AO3 20%	
IT in Society	80%	5	5	8-14	14	2	8	2-3	6	13	12	8	33
Programming for the Web	20%	3	3		4	-	-	-	-	3	4	-	7
Total	100%	8	8	8-14	18	2	8	2-3	6	16	16	10	40

Second Semester

Unit	Weights	Multiple Choice		Short Answer		Long Answer		Scenario Based		Assessment Objective			Total
		No. of Items	Mark	No. of Items	Mark	No. of Items	Mark	No. of Items	Mark	Ao1 40%	Ao2 30%	AO3 20%	
System life Cycle	72%	5	5	8-14	14	1	4	2-3	6	11	10	8	29
Graphic Creation	28%	3	3		4	1	4	-	-	5	6	-	11
Total	100%	8	8	8-14	18	2	8	2-3	6	16	16	8	40

Recording Students Marks

It is imperative that students' grades be accurately documented for every unit or semester by adhering to the following suggested model.

Teachers are encouraged to utilize a spreadsheet that has been prepared in this prescribed format.

Evaluation Form of Student Performance – ICT- (Grades 11-12) – Academic Year 2024/2025

School Name:..... Grade:/..... Semester:.....

Students Name	Continuous Assessment Tools					Total %	Final Exam %	Total %
	Presentation	Practical Assignment	Practical Test	Short Tests		60		
	10	20	10	10	10			

Appendix (1)

Presentation Assessment Form

The purpose of this form is to enable teachers to assess student presentations and provide feedback to students.

Student Name(s):

Assessment Title:

Date:.....

Assessment Deadline:.....

Criteria	Description	Level of Achievement	Student Mark
Content Knowledge and Understanding (3 Marks)	Demonstrates a clear understanding of the topic and presents accurate and relevant information related to IT concepts and principles.	Excellent (3 Marks): Thorough understanding with a concise summary of the topic with all questions answered	/3
		Proficient (2 Marks): Sound understanding with a good summary of the topic and mostly accurate information.	
		Satisfactory (1 Mark): Adequate understanding with some accurate information. The presentation was informative, but several elements and major points were uncovered.	
		Unsatisfactory (0 Mark): Limited understanding with inaccurate or incomplete information. The presentation was a brief look at the topic.	
Organization and Structure (2 Marks)	Presents a well-structured and logically organized presentation with clear headings and subheadings.	Excellent/ Proficient (2 Marks): Clear/ overall clear structure with logical flow and well or mostly well-defined headings/subheadings. No errors in spelling, grammar and punctuation. Information is clear and concise on each slide.	/2
		Satisfactory (1 Mark): Adequate structure with some logical flow and adequately defined headings/subheadings. Some errors in spelling, grammar, and punctuation.	
		Unsatisfactory (0 Mark): Poor structure with unclear flow and poorly defined headings/subheadings. Many errors in spelling, grammar, and punctuation.	
Visual Aids and Presentation Style (2 Marks)	Effectively utilizes visual aids, such as slides and multimedia elements, to enhance understanding and engages the	Excellent/ Proficient (2 Marks): Engaging or mostly engaging and visually appealing with effective use of multimedia and confident or mostly confident delivery.	/2

	classmates with confident and appropriate delivery.	Satisfactory (1 Mark): Adequately engaging and visually appealing with some effective use of multimedia and satisfactory delivery.	
		Unsatisfactory (0 Mark): Lacks engagement and visual appeal with ineffective use of multimedia and poor delivery.	
Communication and Clarity (2 Marks)	Communicates ideas clearly and effectively, using appropriate language and terminology for the target audience.	Excellent/ Proficient (2 Marks): Clear or mostly clear, concise, and articulate communication with appropriate or mostly appropriate language and terminology.	/2
		Satisfactory (1 Mark): Adequate communication with some clarity and use of mostly appropriate language and terminology.	
		Unsatisfactory (0 Mark): Unclear and ineffective communication with inappropriate language and terminology.	
Time Management (1 Mark)	Stays within the allotted presentation time and effectively manages time to cover all key points.	Excellent/ Proficient (1 Mark): Precisely or mostly within the allotted time, covering all or most key points effectively.	/1
		Satisfactory (0.5 Mark): Adequately within the allotted time, covering some key points effectively.	
		Unsatisfactory (0 Mark): Goes significantly over the allotted time or fails to cover key points effectively.	
Total Mark			/10

Additional Feedback

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