Educational Testing and Assessment (EDU0912)

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This module explores the foundational and advanced principles of educational assessment, focusing on classroom decision-making, assessment planning, and the integration of assessment with instruction. It emphasizes both traditional and alternative assessment methods, including formative, diagnostic, and performance-based approaches. Students will critically engage with concepts of validity, reliability, and accountability, and apply statistical and non-statistical tools to evaluate assessment practices. The module also introduces frameworks for grading and reporting, and the role of ICT in modern assessment.

Workload in hours: 120

Number of learners: 10

Mode of delivery: Online

Status: IN PLANNING

Course public access: Public

Contributors:
Mohamed Shaheen

Course learning outcome	Level	Weight
Describe the nature and purpose of assessment, standards, and accountability from a number of perspectives.	Understanding	20
Explain and justify principles of quality assessment	Evaluating	15
Understand the process and planning of assessment	Analysing	25
Apply and evaluate knowledge of alternative assessment methods	Evaluating	20
Critically evaluate methods of assessment, standard setting, and accountability using statistical and non-statistical methods	Evaluating	20
		Total weight: 100

Topic / Unit name	Workload	Learning type	Mode of delivery	Groups	Collaboration	Feedback	Mandatory activity	Assessment		
								Points	Type	Providers

Week 1 - Classroom decision making and using assessment

Describe the nature and purpose of assessment, standards, and accountability from a number of perspectives. (**15%)**

Lecture 1_Assessment										
PPT Students will be presented with PPT and lecturer will explain and engage students in the discussion	120 min	Acquisition	Online	Synchronous	Teacher present	No	Yes	Teacher	No	No
Tutorial 1 Students will do a tutorial exercise on the topic	60 min	Production	Online	Asynchronous	Teacher not present	No	Yes	Teacher, Peer	No	No
Total unit workload	3h									

Week 2 - Describing the goals and learning targets of instruction; Taxonomies for describing learning – Bloom’s Taxonomy and SOLO Taxonomy

Understand the process and planning of assessment (**10%)**, Explain and justify principles of quality assessment (**5%)**

Lecture 2_LO										
Lecture 2 Students will engage in a discussion about leaning outcomes. Students will read artciles about Bloom's Taxonomy and Solo Taxonomy. Students will be provided with the following reading for further understanding: *Nitko and Brookhart, Ch. 2 and Appendix D; Brown, Irving and Keegan Ch. 11 (SOLO taxonomy)*	120 min	Production	Online	Synchronous	Teacher present	No	Yes	No	No	No
Total unit workload	2h									
Tutorial 2										
Tutorial 2 Students will be asked to	60 min	Production	Online	Asynchronous	Teacher not	No	Yes	Teacher, Peer	Yes	No

complete the following tutorial and submit to the Moodle:

Kulliyyah of Education, Islamic University of Maldives

Master of Teaching and Learning

Educational Testing and Assessment

Tutorial – Week 2

1. Write two specific learning objectives for a lesson you plan to teach. Explain how each objective meets the three criteria: student centered, performance centered, and content centered.
2. Choose the syllabus of a subject you teach. Identify the **TWO** learning outcomes which are related to any of the **TWO sub categories of knowledge dimension** (factual, conceptual, procedural and metacognitive). Design **TWO** assessment tasks that can be used to assess the learning outcomes you have chosen. The two learning outcomes and the two assessment tasks should be made at two

present

different levels of cognitive process dimension.

3. Choose a topic of your interest and prepare an assessment task for each level of SOLO Taxonomy (except pre-structural level).

4. Decide whether each learning objectives listed here belongs to the cognitive, affective, or psychomotor domain. Does the performance of each learning objective require some use of elements from domains other than the one into which you classified it? Which one(s)? Explain why.

    a. The student is able to adjust a television to get the best colour resolution.

    b. The student demonstrates knowledge of parliamentary law by conducting a meeting without violating parliamentary procedures.

    c. The student contributes to group

maintenance when working with classmates on a science project. d. The student makes five baskets in 10 attempts on the basketball court while standing at the foul line. · Complete and submit the tutorial Task on ..... · Upload your task to the submission link provided in Moodle under 'Tutorial Tasks'										
Total unit workload	1h									
Week 3 - Validity and Reliability of assessment results										
Lecture and Discussion										
Lecture Lecture on validity and reliability **Asynchronous Lecture:** Detailed video explaining the calculation and interpretation of Cronbach's Alpha.	120 min	Acquisition	Online	Synchronous	Teacher present	No	Yes	No	Yes	No

Tutorial **Activity: "Reliability Case Clinic"** (**Group** - 60 mins). **Task:** Divide into groups of 4. Each group is assigned a different type of reliability (e.g., **Inter-rater Reliability**). They must find a **real-world educational example** where this reliability type is critical (e.g., scoring an oral presentation), explain how it is ensured, and propose a strategy to improve it. Use a shared **Google Slide** deck (one slide per group) to compile findings. (Group work: 45 mins. Quick group share: 15 mins).	60 min	Production	Online	Asynchronous	Teacher not present	Yes	Yes	Peer	Yes	No
Total unit workload	3h									

Week 4 - Planning for Integrating Assessment and Instruction

Lecture

Lecture **Asynchronous Lecture:** Video detailing the principles of **Backward Design** (Wiggins & McTighe) and how it shifts the instructional planning process. **Reading:** Focus on articles or chapters (e.g., Wiggins, 1998) that explicitly address the alignment of learning outcomes, instruction, and assessment. **Interactive Quiz:** A short self-check quiz on the LMS to ensure students can identify an aligned vs. misaligned learning objective/assessment pair.	120 min	Acquisition	Online	Asynchronous	Teacher not present	No	Yes	No	Yes	No

Activity **Assessment Alignment Diagnostic** (**Pair/Group** - 60 mins). **Task:** Provide groups of 3 with three different "Curriculum Scenarios": **Scenario A** (Perfect Alignment), **Scenario B** (Misaligned Assessment), and **Scenario C** (Misaligned Instruction). **Pair** (40 mins): Students in breakout rooms collaboratively analyze their assigned scenario. • They use a shared **Google Doc template** to identify the intended learning outcome (Stage 1), the assessment method (Stage 2), and the proposed instructional activities (Stage 3). • They must diagnose the *alignment flaw* (if any) and propose a solution to fix it. **Group Review** (20 mins): Each pair posts a 1-sentence summary of their diagnosis and solution to the main chat. The instructor facilitates a brief discussion on how a teacher's **assessment literacy** directly impacts instructional planning.	60 min	Production	Online	Synchronous	Teacher present	Yes	Yes	Teacher, Peer	Yes	No
Total unit workload	3h									

Week 5 - Diagnostic and Formative Assessment

Lecture and Discussion										
Lecture and Discussion Activate prior knowledge Conceptual Foundations: Define and differentiate diagnostic vs formative assessment Think-Pair-Share (15 mins): “Why is formative assessment critical for learning?” Comparative Analysis (15 mins): Provide scenarios and ask students to classify them as diagnostic or formative.	120 min	Acquisition	Online	Synchronous	Teacher present	Yes	Yes	No	Yes	No
Total unit workload	2h									
Tutorial										

Tutorial **Forum:** Students post a reflection on the **formal and informal diagnostic assessment practices** currently used in their school context, discussing their strengths and limitations. **Activity: "The School Diagnostic Audit and Intervention"** (**Group** - 60 mins). **Task:** Divide the class into groups of 4-5. Each group must address the following using a shared online **Jamboard** or **Miro board**: 1. **Audit (15 mins):** Based on the discussion forum posts, identify the **single most common diagnostic tool or practice** used across the schools represented in the group (e.g., entrance test, pre-unit quiz). 2. Critically evaluate it against the **Pellegrino (2001) Assessment Triangle**—specifically, does it effectively pinpoint the cognitive gap?	60 min	Production	Online	Asynchronous	Teacher not present	No	Yes	Teacher, Peer	Yes	No
Total unit workload	1h									

Topic 6 - Formative Assessment Tools

Lecture										
Discussion and Tutorial Formative Assessment Strategies • Gallery Walk (20 mins): Stations with different formative tools (exit tickets, peer review, rubrics, apps like Padlet, Mentimeter). Students rotate and evaluate. • Role Play (15 mins): Simulate teacher-student feedback conversations. • Tech Integration (10 mins): Showcase digital tools for formative assessment (e.g., Edpuzzle, Socrative, Flipgrid). 5. Reflection & Wrap-Up (15 mins) Objective: Consolidate learning and encourage future application. Activities: • Exit Ticket: “One insight I gained today…” and “One way I’ll apply this in my teaching.” • Group Reflection: Share takeaways and questions. • Resource Handout: Provide a curated list of readings, tools, and templates for further exploration.	60 min	Discussion	Online	Synchronous	Teacher present	Yes	Yes	Peer	Yes	No
Total unit workload	1h									

Week 7 - Alternative assessment methods: Self- and peer-assessment

Students as Assessors: Shifting Ownership with Self and Peer Assessment

Lecture 1. **Conceptual Foundations:** Define self-assessment and peer assessment (PA/SA). Discuss their theoretical basis (**constructivism, metacognition, and assessment literacy**). 2. **The Benefits (The 'Why'):** Explore the impact on **metacognitive skills**, student motivation, and deeper learning. Use research (e.g., from Wiliam or Stiggins) to show how students' ability to assess quality improves their own work. 3. **Practical Implementation (The 'How'):** Detail the necessary steps for success: **a)** Training students on how to give and receive effective feedback. **b)** The critical importance of **high-quality rubrics** or success criteria. **c)** Strategies for managing bias and ensuring fairness (e.g., anonymity, calibration).	180 min	Acquisition	Online	Synchronous	Teacher present	No	Yes	No	No	No

4. **Digital Tools Showcase:** Briefly demonstrate online tools (e.g., Canvas Peer Review, Moodle Workshop, dedicated peer feedback platforms) that manage the PA/SA process. **Suggested Readings:** **Stiggins, R. J. (1997). *Student-centered classroom assessment* (2nd ed.).** Focus on the chapters related to engaging students in the assessment process Boud (2002)										
Tutorial 1 **Activity Title: "Assess the Assessors"** **Duration:** 45 minutes **Focus:** Understanding and practicing self and peer assessment **Format:** Small group work + whole-class reflection **0:00–0:10	Introduction & Setup** • **Brief Discussion (5 mins):** Ask students: "What makes feedback useful?" and "What's hard about assessing yourself or others?" • **Define Concepts (5 mins):**	60 min	Practice	Online	Synchronous	Teacher not present	No	Yes	Peer, Other	Yes	No

- **Self-assessment:** Reflecting on one's own work to identify strengths and areas for improvement.
- **Peer assessment:** Evaluating a peer's work constructively using criteria.

0:10–0:25 | Mini Task & Self-Assessment

- **Task (10 mins):** Students write a short reflective paragraph (e.g., "Describe your ideal learning environment and why").
- **Self-Assessment (5 mins):**
  - Provide a simple rubric (e.g., clarity, depth, relevance, grammar).
  - Students score themselves and write 1–2 sentences of reflection.

0:25–0:40 | Peer Assessment & Feedback

- **Exchange Work (2 mins):** Students swap paragraphs with a partner.
- **Peer Assessment (10 mins):**
  - Use the same

rubric to assess each other’s work. ◦ Write 2 pieces of feedback: one strength, one suggestion. • **Feedback Discussion (3 mins):** Pairs discuss their feedback and reactions. **0:40–0:45 | Debrief & Reflection** • **Whole-Class Reflection:** ◦ What did you learn about assessing your own work? ◦ How did it feel to give and receive peer feedback? ◦ Where could self and peer assessment be useful in your teaching?											
Total unit workload	4h										
Week 8 - Objective Assessment methods: Completion, Short-Answer, True-False, Multiple-Choice and Matching items											
Objective Assessment methods											

Lecture/ Workshop/Demonstration Lecture on conceptual foundations Live session on writing effective Multiple-Choice Question (MCQ) distractors and developing scoring rubrics for constructed-response items.	120 min	Acquisition	Online	Synchronous	Teacher present	No	Yes	No	No	No
Total unit workload	2h									
Week 9 - Assessment methods: Setting and grading Essays, Reports, Projects										
Week 11 - Alternative assessment methods: Performance and Portfolio assessments. Rubrics – Holistic and Analytic										
Lecture 3										
Lecture 3	120 min	Acquisition	Online	Synchronous	Teacher present	No	Yes	No	No	No
Tutorial 3	60 min	Production	Online	Asynchronous	Teacher not present	No	Yes	Teacher, Peer	Yes	No
Total unit workload	3h									
Week 10 - Assessing higher-order skills: Problem solving and critical thinking.										
Week 12 - Preparing students to be assessed and using students’ results to improve assessment										
Week 13 - Grading and reporting student progress										
Week 14 - Large-scale and high-stakes assessment										
Week 15 - Moderation and ICT in Assessment										
Total course workload	**25h**									