Master of Education in Learning

Design and Technology

Assessment of Online Learning

Summer 2025

Assignment # A1

Grading Rubric

For Final Project

Evaluating and redesign

(Redesign of an Online Assessment Tool)

Submitted To

Dr. Mariam Alghawi Ai-Ali

Done by: Fatima Alaryani.

Student ID: 200116410

Date: Jun. 28, 2025

Introduction:

As a student in the Master of Education in Learning Design and Technology program at HBMSU, I took the Applied Research Methods course in Fall 2024. This course provided a comprehensive exploration of research methodologies, including quantitative, qualitative, and mixed-methods approaches, all within the context of educational technology and design. It significantly enhanced my ability to engage with the educational field through research and design critically.

As part of this course, I selected the grading rubric for the final project as the online assessment tool to evaluate and redesign. This Rubric is used to assess individual research proposals, which include two components: a research report and a presentation. Each component had its own Rubric; for this project, I focused on the Rubric assessing the written report.

Evaluation of the Existing Tool:

In online learning environments, assessment quality is critical and is often evaluated through three main dimensions: **validity, reliability**, and **authenticity.**

- **Validity** refers to the extent to which an assessment accurately measures what it is intended to measure. It reflects a clear alignment between assessment tasks and intended learning outcomes (Hill & Seitz, 2024).

- **Reliability** involves the consistency of assessment results across time, evaluators, or conditions (Seitz & Hill, 2024).

- **Authenticity** reflects the degree to which an assessment simulates real-world tasks and requires learners to apply their knowledge practically (Delanoy, Brown, & Walz, 2024).

Among these, validity is the most critical indicator because it determines the overall effectiveness of the tool. **Validity relies heavily on alignment**, defined as the coherence among learning outcomes, instructional strategies, and assessments (Seitz & Hill, 2024).

To evaluate the rubric's quality, I created a supplementary evaluation rubric that specifically addresses these elements of assessment quality.

Rubric for Evaluating Quality of Grading Rubric

Criteria	Exemplary (3)	Proficient (2)	Developing (1)
Validity	All rubric criteria explicitly measure intended learning outcomes. Clear, detailed descriptors strongly reflect theoretical constructs and outcomes.	Most criteria measure intended outcomes. Descriptors are generally clear, though minor misalignments or ambiguities exist.	There are few or no explicit criteria that align with the intended learning outcomes. Descriptors are vague or unclear, significantly undermining validity.
Reliability	Criteria and descriptors are precise and detailed enough for consistent scoring across multiple raters without variance.	Criteria are generally clear, allowing moderate consistency in scoring, but some ambiguity might result in minor variance.	Criteria are unclear or highly subjective, leading to inconsistent scoring and significant variance among raters.
Authenticity	Tasks and criteria strongly reflect real-world scenarios or meaningful professional contexts. Students apply knowledge and skills practically.	Tasks and criteria somewhat reflect real-world scenarios or contexts but are occasionally overly academic or abstract.	Tasks and criteria show minimal or no connection to real-world scenarios, reducing the meaningfulness and applicability.
Alignment	Full coherence among stated objectives, instructional content, and rubric criteria. Clear connections between each rubric element and outcomes.	General coherence among objectives, instructional content, and criteria. Occasional misalignments or indirect connections.	Limited or no coherence among stated objectives, instructional content, and rubric criteria, causing significant alignment issues.

Challenges in Evaluation

Since the course was **newly introduced**, it was challenging to properly assess the reliability of the rubric. We didn't have multiple evaluators or repeated use of the tool to see how consistent the results would be. Additionally, although authenticity was somewhat present in the spirit of the assignment, **it wasn't clearly outlined in the rubric** or assessment design. These gaps will be thoughtfully addressed in **the redesign** section to improve the overall quality of the tool.

To thoroughly evaluate validity, I created a mapping table that links the learning outcomes, task instructions, and rubric criteria. **This mapping helps identify misalignments and areas for improvement.**

🪓 Mapping of LOs, Task Instructions, and Rubric Criteria

Learning Outcomes (LOs)	Task Instructions	Rubric Criteria	Alignment Evaluation
Evaluate the relevance and importance of a chosen research topic.	**Clearly state the research problem and provide background information** to support **why** the problem is of interest and **why** it is something that is important in the field of education, **online learning design and technology.**	**Introduction / Problem Statement** ▪ Description of **what** the proposed study is about. ▪ **Problem statement is** stated explicitly and is of reasonable scope. ▪ **Background information** provided on problem presented.	**fully aligned**
Identify a research problem	Choose a **research problem** that you are **interested in from your program area.**	**Introduction / Problem Statement** ▪ Description of what the proposed study is about. ▪ Problem statement is stated explicitly and is of reasonable scope.	**fully aligned**
Formulate research questions and/or hypotheses and significance	**Clearly state the research question(s) and/or hypotheses.**	**Research Question(s) / Objectives / Hypotheses and Terminology Operational Definition** * Research objectives are stated clearly and precisely. *Grounded in the literature review and problem statement. *The research question(s), objectives, or hypotheses are researchable/testable.	**fully aligned**
Develop and describe a literature search strategy	**Describe the proposed research methods, design and sample you plan to use and how you plan to recruit participants.** **Describe the research plan and timeline needed to successfully complete the study.**	**Literature Review** *Evidence of knowledge of the field. *Evidence that the project is being built on work that has already been done. *Contains summaries and discussion of limitations of previous work.	**fully aligned**
Conduct a review of the literature	**Operationally define the theoretical constructs that you will be using in your study**	**Literature Review** ▪ Evidence of **knowledge of the field.** ▪ Evidence that **the project is being built** on work that **has already been done.** ▪ Contains summaries and discussion of limitations **of previous work.**	**partial**

Learning Outcomes (LOs)	Task Instructions	Rubric Criteria	Alignment Evaluation
Determine an appropriate research design (quantitative, qualitative, mixed)	Describe **the proposed research methods, design** and **sample you plan to use** and **how you plan to recruit participants.**	**Method and Design** ▪ Description of your **research method**(s) and **justify your** selection. ▪ Description of your **research design**.	**fully aligned**
Design survey instrument(s) or interview questions, or observation checklist, if needed!	Develop **example of survey instrument** (questionnaire / interview), or experiment that will answer your research question.	**Instruments** ▪ **The instruments** you are proposing to use (questionnaire, interview, etc.). ▪ Description of **how** the instrument was developed or chosen. ▪ Instrument(s) **match study objectives** and purpose.	**fully aligned**
Describe a relevant research procedure.	*Describe the research plan and timeline needed to successfully complete the study. *Address **ethical considerations relevant** to your project.	**Procedures** ▪ **Procedure are directly related** to the research objectives / questions. ▪ Study **design** is identified and appropriate for the research objectives and sample. ▪ **Ethical considerations** are clearly described. ▪ **Procedure described** in sufficient detail to enable replication of study.	**fully aligned**
Propose appropriate analyses (quantitative and/or qualitative)	Identify and describe which **expected analyses will be required and why.**	**Proposed Analyses** ▪ **Description** is provided detailing the proposed analyses. ▪ Proposed analyses directly address **research objectives** (questions / hypotheses).	**fully aligned**
Discuss anticipated conclusions	–	–	**No direct alignment**

Learning Outcomes (LOs)	Task Instructions	Rubric Criteria	Alignment Evaluation
Identify limitations of the study	**Identify potential limitations** of your study (internal and external validity issues).	**Questions** of validity and reliability have been addressed.	**fully aligned**
Demonstrate good academic writing: Correct document structure, good use of language, and referencing format based on well-known citation style(s)	Include a **complete list of references in APA.**	**Writing & References** ■ Writing is **clear, easy** to follow, and free from grammatical errors. ■ The use of **direct quotations** has been avoided other than to prove an argument. ■ All quotations and statement of facts have been **cited correctly**. ■ All citations presented in the body of the paper are **listed in the reference** section and vice-versa. ■ Citations and references conform to **APA** (or other recognized) style.	**fully aligned**

Although the rubric does a good job of evaluating student research overall, the mapping process **uncovered some weak spots**; areas where the learning outcomes, task instructions, and rubric criteria don't fully line up. ==**These misalignments affect the tool's validity,**== which is key to making sure the assessment is both fair and meaningful. Fixing these issues is at the heart of the redesign process.

The Redesign Process:

Before diving into the redesign, it's important to take a moment and think about what this final project really means. It's more than just another academic assignment; it is a chance to connect what we've learned in class with the kind of research we'll actually do out in the world.

DESCRIPTION:

The planning and development of applied research proposals is critical to the success in this course. An effective, clearly written, proposal is key to securing funding and/or recognition. In the master degree programs, the first step to a successful dissertation is a well-structured and complete proposal and selecting an appropriate research method. ==The goal of this project is to plan and develop a complete research proposal with consideration to future development of the proposal through a presentation at a conference, a Master dissertation in Learning Design and Technology field(s), or to secure funding for your organization.==

Evaluation will be based on the following criteria: **(1) Structure of the proposal (all required elements present); (2) Clarity of ideas; (4) Solid conceptual and theoretical framework; (4) Meaningful proposed research methods and designs; (5) Research informed development of measurement instruments; and (5) Use of clear, precise, scholarly writing.**

This project gives us **a safe space** to try out our ideas, learn through experience, and build both **confidence** and **skills.** It pushes us to go beyond just theory and start thinking like real researchers. In many ways, it's setting the stage for what comes next, whether that's working on a dissertation or stepping into our careers as thoughtful, capable educators and professionals.

While the original Rubric captures this aim, **it requires refinement to ensure more substantial alignment with all learning outcomes** and increased focus on authenticity.

Drawing from the work of Brookhart (2018), Panadero & Jonsson (2020), and Ling (2024), I analyzed the language of the learning outcomes and rubric criteria for **clarity, precision, observability**, and **measurability.**

The revised learning outcomes (LOs) aim to **improve authenticity** and connection to real-world practice:

1. Share why your research topic really matters in day-to-day educational life and how it could positively impact teaching and learning.

2. Spot a research problem that highlights real issues or current trends educators are facing today.

3. Create research questions or hypotheses that focus on real needs or gaps educators face in their work.

4. Develop and describe a literature search strategy reflecting current best practices in the field.

5. Conduct a literature review that situates your study within ongoing scholarly and professional discussions.

6. Choose and explain a research design that fits well with real educational or organizational settings.

7. Create practical survey instruments, interview questions, or observation tools suitable for field-based data collection.

8. Describe research procedures that reflect ethical and feasible approaches in actual practice settings.

9. Pick data analysis methods that best help answer your research questions in educational contexts.

10. Reflect on the possible conclusions your study might lead to, and think about how these insights could make a real difference in educational practices or policies.

11. Be honest and thoughtful about any limitations your research might face in real-world settings. What challenges could come up, and how might they affect your study?

12. Show that you can communicate your ideas clearly and professionally by using well-structured, polished academic writing with accurate language and proper citation style.

Finally, based on these LOs, I will create a new rubric:

Dimension	Masterpiece (4)	Skillful (3)	Emerging (2)	Needs Refinement (1)
🎯 **Purpose & Relevance**	Paints a vivid picture of the topic's real-world importance with compelling justification	Clearly expresses relevance to practice with specific examples	Mentions importance with minimal connection to the real world	Relevance is unclear, generic, or missing
🔍 **Defining the Problem**	Sharp and timely problem definition that resonates with current educational issues	Clear problem definition with moderate contextual grounding	Vague or loosely related to real challenges	Ambiguous or absent problem
❓ **Research Focus**	Research questions/hypotheses are laser-focused, actionable, and grounded in real needs	Mostly clear and relevant to practice	General or partly disconnected from purpose	Unfocused or missing
🔍 **Search Strategy**	Demonstrates a treasure hunt approach: thorough, methodical, and well-sourced	Covers key sources with reasonable structure	Incomplete or outdated strategy	Missing, confusing, or unclear strategy

Dimension	Masterpiece (4)	Skillful (3)	Emerging (2)	Needs Refinement (1)
Literature Review	Thoughtfully curated, critically engaging, and clearly connected to study context	Covers essential literature with some insight	Basic summary with limited connections	Absent or disconnected
Research Design	Intentionally selected and powerfully justified design aligned to real-world context	Appropriate design with adequate rationale	Weak justification or limited alignment	Inappropriate or missing design
Tools & Instruments	Creates insightful, field-ready tools with clarity and purpose	Tools are functional but may lack depth or detail	Underdeveloped or moderately suitable	Tools are ineffective or missing
Process & Ethics	Crystal-clear roadmap of feasible, ethical procedures for real-world implementation	Mostly ethical and clear, with minor gaps	Vague procedures or weak ethical reflection	Ambiguous or ethically questionable steps

Dimension	Masterpiece (4)	Skillful (3)	Emerging (2)	Needs Refinement (1)
Data Analysis	Analytical approach is sharp, relevant, and well-defended	Reasonably aligned and mostly justified methods	Unclear logic or loose fit with questions	Absent or inappropriate techniques
Expected Impact	Anticipates transformative conclusions with direct educational relevance	Offers meaningful, realistic implications	General or weak relevance	Conclusions are unclear or missing
Limitations Awareness	Transparent and critical discussion of realistic constraints and their impact	Identifies limits with basic reflection	Mentions limits but lacks depth	Ignores or misrepresents limitations
Academic Communication	Engaging, scholarly, and polished writing with perfect structure and citation	Mostly accurate with a few errors	Noticeable issues in clarity or formatting	Unclear, inconsistent, or poorly cited work
Overall Score	16-14	13-10	9-6	5-1

Conclusion

In conclusion, this experience has significantly developed me; when evaluating the grading rubric designed by an expert's hand, it is not easy, but we never say never! Therefore, I believe it guides me to see deeply and touch the secret of an effective online learning assessment tool. It encouraged me to play a systematic game when I wear an evaluation lens to avoid any potential bias, which supports me to follow the simple redesign steps. It is too simple to be popular, and easy to follow to determine whether it will be reliable in the future. I believe the journey starts now by flying into the assessment sky with critical and creative wings.

This redesign aimed to enhance the alignment, validity, and authenticity of the original assessment rubric used in the Applied Research Methods course. Through mapping and a focus on high-quality assessment principles, the revised rubric better reflects real-world expectations and learning outcomes. These changes are designed to support learners' academic growth and readiness for professional research and practice.

References:

- Knapp, T. R., & Mueller, R. O. (2010). **Reliability and Validity in Research**. Sage Publications.

- Brookhart, S. M. (2018). **How to Create and Use Rubrics for Formative Assessment and Grading**. ASCD.

- Panadero, E., & Jonsson, A. (2020). **Rubric-Based Assessment and Student Learning. Assessment in Education: Principles, Policy & Practice**.

- Ajjawi, R., Tai, J., Bearman, M., & Dawson, P. (2023). **Authentic Assessment: Meaningful Real-world Tasks. Assessment & Evaluation in Higher Education**, 48(1), 1-15.

- Seitz, P., & Hill, S. L. (Eds.). (2024). **Assessment of online learners: Foundations and applications for teacher education.** Routledge. https://doi.org/10.4324/9781003347972

- Hill, S. L., & Seitz, P. (2024). **Validity, reliability, authenticity, and alignment in online assessment**. In Assessment of online learners: Foundations and applications for teacher education (pp. 1–12). Routledge. https://doi.org/10.4324/9781003347972-1

- Delanoy, M., Brown, C., & Walz, A. (2024). **Authentic Assessment in Online Learning**. EdTech Press.

- Hill, J., & Seitz, D. (2024). **Assessment Validity in Online Education**. Educational Measurement Quarterly.

- Ling, S. (2024**). Designing Measurable Learning Outcomes**. Learning Design Today.

- Seitz, D., & Hill, J. (2024). **Reliability and Validity in Educational Assessment**. Ed Research Review.