

ERAol: A-10 MINUTES FORMATIVE EVALUATION APPROACH

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Highlights: A concept for a 10-minutes online formative assessment was proposed and initially executed and called as ERAol. Through online learning, ERAol is an in-depth learning approach that aims to enhance the understanding level among students who attend the Environmental Risk Assessment (ERA) course. The course aims to integrate existing knowledge that requires students to critically analyze environmental issues, followed by proper risk assessment execution. Thus by using the ERAol enables students to alert by defining their learning progress continuously. Also, the method is expected to instantly identify week to week progress of students' acceptance for the course contents.

Keywords: *online assessment, environmental risk, interactive learning*

Introduction

The pandemic of COVID-19 gave no other choices for educational institutions across the globe to adapt and adopt online learning. Other regular terms used for describing online learning are computer-mediated learning, distributing learning, and e-learning (Rudestam & Schoenholtz, 2010). The teaching and learning are enhanced using various interactive online learning tools to make the online learning ambient interesting and student-engaged. Close (2020) mentioned that the crucial elements in choosing the correct online content delivery and meaningful assessment are the practical purpose of fulfilling high-stakes or low-stakes.

Content

The subject of ERA is a cross-disciplined course offered in Sustainable Science Program. Worth mentioning, the course learning outcome (CLO) for the ERA subject and the Programme Learning Outcome (PLO) of the Sustainable Science Program are relevant to address the Sustainable Development Goals (SDGs). In conjunction to achieve the CLO and PLO, the ERA course outline requires the enrolled students to integrate and incorporate their existing knowledge gained from previously offered fundamental courses. Thus, the ERAol approach was designed to facilitate the students' learning engagement during the ERA course. First, the ERAol adopt several user-friendly interactive tools for collectively assess students understanding of each weekly topic, conducted during a pre-and post- lecture session. The tools were either Kahoot, online quizzes and games, or an e-campus blog which only consume less than 5 minutes of each lecture session. Secondly, the ERAol applied 'The Minute Paper' approach, a reflection tool that promotes students to identify what information they gathered most challenging during the online lecture. The reflection approach helped to determine if the students needed further assistance. Thirdly, knowledge-based feeling rate via the google form tool was applied, which provided space for the students to rate themselves their intensity of feeling based on their knowledge-gathering during the online lecture. Emphasis was also given to ensure students could grab technical skills for risk analysis using an online laboratory demonstration. A recorded video of the risk calculation demonstration was employed. As a result, the learning activities in ERAol helped the students analyze environmental problems such as water, air, noise, and other types of pollution using appropriate and effective risk assessment, and then able to propose a well-inform solution.

Acknowledgment (if any)

The authors are grateful for the assistance received from the Faculty of Earth Science, UMK Jeli Campus.

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