

Dr Kamaruddin and Dr Ladin– Malaysia –

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Online assessment on affective and psychomotor domains

Purpose and context of the presentation

Online education has been a reality for two years now in Malaysia, and it has had strong effects on teaching, learning and assessment. Students appear to be getting less engaged in synchronous online lectures, for example not putting on their webcams, and less motivated overall. After four semesters of online learning, the University of Malaya has developed guidelines for online teaching and learning, and identified challenges with online assessment. The framework for developing these guidelines is the three learning domains of cognitive, affective and psychomotor (the latter two are the focus of this presentation). This is explained using examples from education and arts education.

Guidelines for teaching and learning

1. Online lectures should be no longer than one hour with a maximum of two hours. Lectures should be broken up with discussions and activities. This guideline is to support students with low incomes and therefore limited data and limited access to devices.
2. Use collaborative activities and problem-based learning. For the faculty of education, this can include text reading, case summaries and field work. The usual community-based field work has been changed to an e-version in which students offer tutoring to orphanages or community centres. Students record and report on the sessions for assessment.
3. Assessment is based on multimedia, such as video, creative multimedia, e-portfolios, e-books, problem-solving, take-home tests, take-home quizzes, take-home reports and animation. Students give live or pre-recorded presentations. This promotes variety of teaching and learning and variety of assessment.

Challenges regarding assessment

When students first completed online exams, their level of output increased from 1-2 pages of written work during face-to-face exams to 10+ pages in the online environment, leading to the belief that a great deal of plagiarism had occurred. This has been explicitly proven in some cases. To overcome this challenge, alternative assessments have been implemented, including the above as well as reflective portfolios, reflective journals, oral tests, interviews and creative writing.

Another challenge has been the industry experience component of the education programs. During lockdown, students could not complete experience at schools, preschools, childcare centres and with counselling patients. Other faculties, such as nursing and medicine have experienced similar challenges.

Presentation Summary - Extracted Key Points from September AAAF Presentations

Bloom's taxonomy and learning domains

- Cognitive domain: The cognitive domain covers the Bloom's taxonomy categories of *knowledge, comprehension, application, analysis, and synthesis*.
- Affective domain: This covers the learning attitudes and feelings that are the result of the learning process, including *receiving, responding, valuing, organizing, and characterizing*.
- Psychomotor domain: This is about a learner's ability to use motor skills to learn, including the categories of *perception, set, guided response, mechanism, complex orbit response, adaptation, and origination*.

The affective domain

The affective domain describes learning objectives that emphasize a feeling, tone, emotion or degree of acceptance and rejection. This requires looking at the students' motivation, attitude, receiving, responding, valuing and organization and characterization. To assess the education students in their affective domain, the lecturers use *Likert scales, rating scales, observation* (less so online), *discussions*, and most commonly online: *checklists and self-reflection*. In the arts education context, this is observed through *recorded observation, and the attitudes and behaviour* of the students.

The cognitive domain

A brief example of incorporating the cognitive domain was provided in the context of art education. Here, cognitive aspects include *understanding the elements of arts, principles of art, knowledge of tools and materials, composition, form, finishing, understanding and appreciation*.

The psychomotor domain

This domain in arts education involves students' skills in using drawing and other art tools and materials, holding a brush, student artwork, process skills and the final result. These elements are difficult to authentically observe and evaluate in online learning. One way to overcome the issue is to use e-portfolios for assessment. They source their ideas, explain the processes and materials required, demonstrate or explain the techniques and show the finished items through multimedia portfolios. Assessment criteria include materials, process, technique and creativity.

Conclusions

A final word on the challenges of online education.

Academic dishonesty in online assessment has been a major challenge. Lecturers try to take the stressed circumstances of students into account, but this can be difficult, especially when there is poor communication between students and lecturers. Connectivity and financial barriers cause students to drop out or defer because study is too difficult. Communication issues, also due to connectivity, and poor-quality assessment tasks due to students' poor time management are also challenges.

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