Design of Open Educational Resources-Integrated Online Courses to Support Undergraduate Learning

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ABSTRACT

This thesis has investigated the desirable instructional design features to be incorporated in the design and development of Open Educational Resources (OER)-integrated online courses for undergraduate learners. To achieve the research goal, the key research question was formulated as - "What Instructional design features should be incorporated in OER-integrated online courses to support undergraduate student learning?"

The study adopted a Design-Based Research (DBR) approach, where both theory and practice were linked up in solving a real-world issue through a systematic process. Research objectives of the study were aligned with the four phases of the DBR process which are: Analysis of the problem; Design and development of an intervention in multiple iterations; Implementation and evaluation of the intervention; and Reflection to produce design principles.

The intervention was designed and developed as OER-integrated online courses which were implemented and evaluated in two main iterations, constantly refining the instructional design features based on the analysis of data collected during different stages. The study has used mixed methods; using questionnaire surveys, Experts' reviews and interviews, in collecting data during several stages of the process. Both quantitative and qualitative methods were used for data analysis.

Instructional design (ID) features were explored under four main instructional design aspects - Information design, Instruction design, Interface design and Interaction design. This resulted in identifying fourteen key ID features as desirable, under the above four aspects. The final data analysis resulted in formulating a design framework for OER-integrated-online courses for undergraduate learners, based on those ID features. This framework specifies the desirable ID features that are relevant to each ID aspect and their significance in relation to the 5R concept of Retain, Revise, Reuse, Remix and Redistribution, in OER integration. The study resulted in producing usable design principles for OER-integrated online courses as a framework. It signifies the importance of adopting desirable ID features and the use of OER-integration in online course design and development for undergraduate learning.