

Introduction of a Four Stage Process of Developing Interactive Multimedia Based E-learning Materials

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Abstract

Interactive multimedia-based learning materials have been commonly used to facilitate teaching and learning. Technological tools have made the task of creating expression through multimedia more easily available. Invariably this has altered the dynamics of interactions that have traditionally constituted educational ecology of the classroom.

Sri Lankan higher education sector has slightly move towards student-centered (collaborative) e-learning based around construction to increase equity of access to education, to improve teaching and learning, and to promote students and academic staff in student-centred and activity-based teaching and learning. In designing pedagogically sound interactive multimedia-based e-learning materials, a high premium needs to be placed on leveraging a judicious mix of various presentation modes to cater to user's differing learning styles and needs. This will ensure that learning is optimized which is essentially student-centred in nature in multimedia rich learning environments. However, as identified by National E-Learning Resource Center (NELRC) at University of Kelaniya, Sri Lanka, most of public higher education institutes largely use face-to-face teaching while e-learning is used as a supplementary tool. There is a lack of understanding of developing technological and pedagogical sound interactive multimedia based e-learning materials which are current problem areas seeking attention.

This study used qualitative methodology which made use of qualitative method such as content analysis. This includes three distinct approaches: conventional, directed, and summative. This study used conventional content analysis where coding categories are derived directly from the text data. Based on conventional content analysis of e-learning literature which published in 2010-2016 and retrieved from EBSCO database, the four-stage process i.e. Analysis, Design, Develop, and Delivery has been developed to be used in developing technological and pedagogical sound interactive multimedia based e-learning materials in the Sri Lankan higher education system.

After understanding the requirement of developing e-learning materials, the identified process start with the analysis stage which include multiple stages i.e. analyze the needs, cost, content, market, technology, and delivery method and assessment strategies. Design, develop, and delivery stages can be then carried out which also include multiple steps. This process will be useful as a guide for any e-learning centers or any teaching and learning organization for developing interactive multimedia based e-learning materials.

Keywords: *Interactive multimedia, E-Learning, Sri Lanka*