Designing an integrated teaching and learning of mathematics and image processing in engineering technology

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Abstract

Engineering technology subjects require some mathematical applications as the foundation to succeed in the subjects. However, students find the theoretical subjects like mathematics as unattractive and difficult. This happens due to the inability of engineering technology students to link between mathematical knowledge and technological applications. Furthermore, students are unable to understand the importance of mathematics in engineering technology subjects which consequently contribute to their poor academic performance. The current teaching approach which separates the teaching of mathematics from engineering technology subjects does not encourage students' understanding in both subjects. In this paper, the focus has been given to the development of an integrated teaching and learning module of mathematics and image processing subjects known as Maths-IP Room. It has the purpose to increase students' understanding in both subjects. This proposed module will be designed using ADDIE model. Web-based application and M-learning system will be used as the platforms for the proposed module. This module is hoped to make the acquisition of knowledge in mathematics and image processing can be enhanced.

Author keywords
Image processing; Instructional design; Mathematics; Teaching and learning

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