Design and development of physics module based on learning style and appropriate technology by employing Isman instructional design model

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Abstract
The study was aimed at designing and developing a physics module based on learning style and appropriate technology in secondary educational setting by employing Isman Instructional Design Model and to test the effectiveness of the module. The paper draws attention to the design principles which employs Isman Instructional Design Model. The prototype module was tested among two teachers and 34 participants. The findings from interviews with the teachers and students show a positive response in Physics when their learning styles are matched with appropriate technology. In the evaluation phase, two instruments were used to collect data for this study. The pre-posttest designed to identify students' achievement score and Felder Silverman's Learning Style Inventory to measure students' learning style. Findings from evaluation of the module conducted among 120 participants involving 30 participants of each learning style (visual/verbal, active/reflective) suggested that the module is effective for visual, active, reflective and not for verbal learners. The researchers also compared the effectiveness of the module according to gender. The verbal and reflective modules were effective for female learners and not for male learners. The findings from this study suggest that Isman Instructional Design Model which pays attention to instruction from the learner perspective than from content perspective is suitable in designing and developing Physics module based on learning style and appropriate technology in secondary educational setting in Malaysia. The findings of this study are also hoped to provide insights to promote teaching and learning of Physics based on learning style and appropriate technology. © The Turkish Online Journal of Educational Technology.

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