Implementation of PtechLS Modules in Rural Malaysian Secondary School: A Needs Analysis
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ABSTRACT
Research has shown that the strategy of matching learning style with certain technology enhances students' learning experience. This study seeks to identify the learning styles among students in a rural secondary school, based on the Felder Silverman Model (1988) which comprises four dimensions (visual/verbal, active/reflective, sequential/global, sensing/intuitive). A PtechLS module developed by Norlidah Alias (2010) will be implemented in secondary school. The main objective of this study is to analyze the needs for a pedagogical module based on technology and learning style (PtechLS) for the Form 4 Physics curriculum before the implementation. Data were collected through surveys among 47 students in a rural secondary school in the Jempol district in Negeri Sembilan. Two instruments were used: learning style instrument and computer skills and usage questionnaire. From the learning style instrument, most of the students were identified as active (89.3%), reflective (10.7%), sensing (78.7%), intuitive (21.3%), visual (95.7%), verbal (4.3%), sequential (70.2%) and global (29.8%) learners. The computer skills and usage questionnaire shows that students in the selected rural school have access to technology and are already using it for learning. Therefore, the researchers suggest the implementation of PtechLS modules among rural Malaysian secondary schools.

Keywords: PtechLS, Physics Curriculum, A needs Analysis

INTRODUCTION
The strategy of matching learning style with certain technology enhances students learning experience (Norlidah Alias, 2010; Norlidah Alias & Saedah Siraj, 2012; Norlidah Alias, Dorothy DeWitt, & Saedah Siraj, 2013). Learning style defines how a learner concentrates, processes and retains information during learning (Dunn, 1990). Identifying a learner's unique learning style is important in ensuring that learners are engaged in learning (Graf, Kinshuk, & Liu, 2009; Larkin-Hein & Budny, 2001; Naimie, Siraj, Ahmad Abuzaid, & Shagholi, 2010; Yang & Tsai, 2008). It has been observed that when instruction is aligned with the learners' learning styles learning achievements will increase together with affective and motivational advantages (Aviles & Moreno, 2010; Franzoni & Assar, 2009; Lau & Yuen, 2010; Saeed, Yang, & Sinnapan, 2009).

Previous research suggests that matching the Physics concept, technology and learning styles can increase the students' mastery of concepts (Hein, 1997; Ross & Lukow, 2004; Tsoi, Goh, & Chia, 2005). A Physics pedagogical module based on learning style and appropriate technology (PtechLS) was developed by Norlidah Alias (2010) to enhance the learning of abstract concepts in Physics by matching learning style and appropriate technology. The module was later experimented among 120 urban students in the Klang Valley of Malaysia (Norlidah Alias & Saedah Siraj, 2012) involving 30 participants of each learning style (visual/verbal, active/reflective). The results of the study suggested that the module is effective for visual, active, reflective and not for verbal learners. The researchers also compared the module effectiveness