UNIVERSITI TEKNOLOGI MARA

SLOW LEARNER REMEDIAL IN MATHEMATICS USING THE HAPTIC INTERACTION

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ABSTRACT

Courseware plays an important role in teaching and learning processes. Many students have benefited from these applications, especially slow learners. Slow learners are those students that require special attention and remedial class in learning. The specialized tools or courseware may be able to attract them to learn and eventually assist in their cognitive development effectively, especially mathematics. Mathematics is an important subject for everyone for everyday application. An applicable approach is still required although many approaches have been designed to assist the slow learners in their cognitive learning. This study attempts to design and develop mathematics module for slow learner using haptic interaction. The study also conducts a satisfaction evaluation of the courseware towards slow learner student. The study employs the user-centered design approach to design the haptic interaction in the courseware. Two requirements gathering approaches have been conducted: interviews with the special education teachers and classroom observations on how the slow learners practically learn. The pilot results of the study are used to design the haptic interaction in this courseware. There are 3 primary schools officially having slow learners which are *Sekolah Kebangsaan Bandar Baru Sintok*, *Sekolah Kebangsaan Tunjang* and *Sekolah Kebangsaan Dato' Wan Kemara*. A total of 30 slow learners from three schools were selected to participate in the usability testing to test the courseware. The findings showed that slow learners require more time to learn even though computational tools were employed. Interview with teachers strengthens the content that the designed courseware is suitable and applicable for the slow learners. It can be concluded that the use of haptic interaction courseware learning helps and serves as a promising approach for teaching the slow learners

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