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Personalized Learning: An Analysis Using Item Response Theory

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Abstract : Personalized learning becomes increasingly popular which not is restricted by time, place or any other barriers. This study proposes an analysis of Personalized Learning using Item Response Theory which considers course material difficulty and learner ability. The study investigates twenty undergraduate students at TATI University College, who are taking programming subject. By using the IRT, it was found that, finding the most appropriate problem levels to each student include high and low level test items together is not a problem. Thus, the student abilities can be asses more accurately and fairly. Learners who experience more anxiety will affect a heavier cognitive load and receive lower test scores. Instructors are encouraged to provide a supportive learning environment to enhance learning effectiveness because Cognitive Load Theory concerns the limited capacity of the brain to absorb new information.

Keywords : assessment, item response theory, cognitive load theory, learning, motivation, performance
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