

Development of Mobile Assessing (M-Assessing) Based on Modern Theory Tests to Assess Higher Order Thinking Capabilities

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ABSTRACT

The use of technology in assessing learning outcomes is part of one of the changes in society in the field of education in general during the digital revolution, and specifically during the Covid-19 pandemic and welcoming the new normal system. The industrial revolution 4.0 had a huge impact on the assessment of learning outcomes. The potential use of mobile technology-based mobile assessing (M-assessing) both personal computers and cellular can be an opportunity in the world of education. Assessment of learning outcomes that must meet the criteria of validity (validity) and reliability (reliability) is often ignored. As well as the demands of learning in tertiary institutions as a printer for people who have highlevel thinking skills (HOTS) and are competent in the 21st century. HOTS questions based on the SOLO (Structure of Observed Learning Outcome) taxonomy are considered very appropriate to be used to assess student HOTS. Because students as human resources in the industrial era 4.0 must be able to have abilities such as being independent (multi-structural), connecting data or facts with theory (relational), and generalizing structures beyond what is learned (extended abstract). These are all elements of higher order thinking skills based on the SOLO taxonomy. The above is the basis for the importance of this dissertation research for the development of M-assessing based on modern test theory to assess physics higher order thinking skills (HOTS) in students that are valid and reliable.

The objective of this second year's research is to build and develop a computer-based test (CBT) based M-assessment media to assess HOT Physics abilities using the Four Tier Test (PhysHot4T2) on students, it is hoped that this assessment will be able to measure students' HOT abilities with more precision.

Kata Kunci: *Mobile assessing, HOTS Physiscs*