DEVELOPMENT OF A PHYSICS HOTS ASSESSMENT MODEL FOR PROSPECTIVE TEACHERS CBT BASED

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ABSTRACT

Indonesia in 2045 will enter its golden age as a country that has entered during 100 years of independence. Various competencies must be owned by future generations future to meet the vision of a golden Indonesia in 2045. One of the skills that must be possessed to meet this is the skill of higher order thinking (Higher Order Thinking Skills, HOTS). HOTS is important for everyone to have, including prospective teachers. In the world of education, several studies have been conducted to increase participants' HOTS students, both in the learning process and in the context of the assessment of learning outcomes. There have been many studies related to the development of HOTS assessment instruments carried out, both paper-based tests (PBT) and computer-based tests (CBT). This research is dominated at the secondary school level, while for the education level relatively little height. Even though HOTS must be owned by everyone, no exception student. It is not surprising that HOTS is a part of learning outcomes (Learning Outcome, LO) in college. The purpose of this research is to develop an assessment HOTS CBT-based physics teacher candidates.

This research is included in the Research and Development (R&D) type of research. with the development model used for test development is a modification instrument development models from Wilson and Oriondo & Antonio. Whereas for CBT media development uses a 4-D development model. Test design stage includes: (1) determining the purpose of the test, (2) determining the competence to be tested, (3) determining the material being tested, (4) preparing test grids, (5) writing items based on principles HOTS Test development, (6) test item validation, (7) item repair and test assembly, and (8) preparation of scoring guidelines. The testing phase of the test includes: (1) determining the test subject trials (SMA), (2) implementation of trials, and (3) data analysis of trial results. The last stage in the development of this test is the assembly of the test. While the development of CBT media using the 4-D development model from Thiagarajan (1974: 5) includes (a) define, (b) design, (c) develop, and (d) disseminate. The data collection technique used is technique tests to assess the HOTS of prospective teacher students and non-tests to measure effectiveness implementation. Data analysis was carried out quantitatively including validity, reliability, analysis GPCM to estimate item parameters and capabilities, information functions and standard errors measurement (SEM).

This research was conducted for two years. The first year (2021) is focused on preliminary studies, instrument creation and initial CBT design to scale trials limited edition and publication and the second year (2022) carry out the field / scale trial phase wide area, dissemination, publication and copyright filing. The output of this research is for the first year (2021) in the form of international proceedings articles, articles in reputable national and international journals and Copyright. For the second year (2022), the output is in the form of international proceedings articles, two international journal articles, and copyrights. As for the Level of Technology Readiness (TKT) research in year 1 is TKT level 2, and in year 2 is TKT level 3.

Kata Kunci: *Developent, Physiscs HOTS assessment, CBT*