

ABSTRACT

THE DEVELOPMENT OF ITEM ANALYSIS PROGRAM COMPUTER BASED

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The aims of this research are (1) to develop item analysis program computer based which can help teacher in conducting item analysis; (2) to know the effectiveness of using computer based item analysis program using in conducting item analysis.

This research was done through 7 steps of research and development which was adapted from R & D Cycle Borg and Gall model, there are research and information collecting, planning, develop preliminary product, preliminary field testing, preliminary product revision, main field testing, and operational product revision. Product design was done through 4 steps system life cycle (SLC) development model, namely planning, analysis, plan and application. Products were evaluated by colleague evaluation, information system experts and evaluation expert and product testing has been carried out at 10 junior school and senior high school. The data taken were then analyzed by using qualitative analysis and statistical t-test.

The conclusions of this research and development are (1) to produce a creation and innovation product in form of item analysis software "Simpel PAS". This program has the advantages in operating speed, practical, comprehensive coverage, the sharpness of analysis result interpretation and is equipped with a reference, user guide and tutorial program. The facilities provided are: tabulation of data, table of score, analysis of absorptive capacity, completeness competence, item differ power, difficulty level, the effectiveness of humbug, item quality, the reliability and validity as well as graphing the results of analysis; (2) Simpel PAS is more effective than the existing products, it can be seen from the operating speed, productivity, working comfortness, user friendly, analysis completeness, ease of analysis result interpretation, with effectiveness average score 89% and other product 71% it means $\mu_1 > \mu_2$. It is strengthen with the results of statistical test with t-test of right side obtained $t_{count} = 14,02$ and $t_{table} = 1,76$. Because $t_{count} > t_{table}$ therefore it refuses zero hypothesis and accepts alternative hypothesis which expresses that Simpel PAS program is better than any other program to assist educator in conducting analysis easily.

Keyword: Item Analysis Software