

# The Development of Computer-Based Personality and Social Competency Test Questions for Teacher Professional Education (TPE) Participants Automotive Engineering Expertise

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## ABSTRACT

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#### Abstract

The purpose of this study was to develop computer-based personality and social competency test questions. This competency test question is very important for the success of the implementation of TPE, considering that the quality of TPE is determined by the existence of a computer-based National Written Test with one of the test materials is personality and social competency.

This research was carried out with a research and development approach to the Borg and Gall model by simplifying the steps according to the needs and situations that affect the timing of this research, especially the occurrence of the Covid-19 pandemic outbreak. To analyze the quality of the results of this development, the Anates 4.0 program was used, and validity analysis was also carried out using the product moment correlation coefficient test statistical technique, while the reliability of the items was tested by calculating the Cronbach Alpha correlation coefficient.

The results of this study are: (1) the development of computer-based personality and social competency test questions for TPE participants with automotive engineering expertise is carried out through various stages, namely: (a) the planning stage which includes: question content, question form and number of questions, (b) the implementation stage of writing questions (c) the development stage of a computer program, (d) the testing phase, and (e) the evaluation stage of the quality of the development results followed by the final revision stage, (2) the main steps in the process of creating a computer program for this personality and social competency in general consist of four stages, namely: (a) the stage of adjusting the form / format of the questions to a format that is acceptable to the computer system, (b) the stage of uploading questions that have been adapted to the format, (c) the setting stage of scoring all the answer options for each question, and (d) the testing phase of the questions with preview mode to check the suitability of the settings while going through and editing for items that still need improvement, (3) the items of the personality and social competency test items has met the requirements, either through rational analysis of the material, construction and language aspects as well as empirical analysis which includes validity, reliability, difficulty level and distinguishing power, although there are still some items that need to be improved.

Kata Kunci: *competence, personality, automotive*