

A study on the item Characteristics analysis of Paper-Based Tests and Smart device-Based Test items.

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- **Abstract:** This study tried to analyze the characteristics of the items in the optician national board examination according to item response theory and to find if the test items are adequate or needs to be modified for the evaluation of learners' ability level. Through the item analysis based on item response theory, it is possible to estimate an error of measurement accurately according to individual learner's ability level. Paper-based and smart device-based trial tests for the optician national board examination were planned to show multimedia type, data-suggestion type, and text type items to test takers. As a result, item difficulty and item discrimination were not greatly different between the paper-based and smart device-based trial tests for the optician national board examination. In particular, to collect opinions of the persons concerned for the introduction of smart device-based test and to stabilize the introduction of the smart device based national board examination perfectly, it is necessary to conduct various pilot projects to support experiences of smart device-based test. In order to develop multimedia items to encourage the problem-solving ability of people with different kinds of occupations, it is necessary to establish guidelines that help access object and standardized data which do not infringe an information use policy, among internet-sharable video.
- **Keywords:** Paper Based Test (PBT), Smart Device Based Test (SBT), National Board Examination, Item response Theory