An Application of Linear Test Equating Method in Scoring

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Abstract

The purpose of this study is to provide the basis for understanding the process of score equating through the use of classical test theory (CTT), especially linear test equating methods and conducting a preliminary tryout of linear test equating method in scoring for the achievement tests. Quantitative methods were applied in this study. To obtain the required data, the Grade 11 Physics and Mathematics Achievement tests were used. These two achievement tests were scaled by adapting linear test equating method design A and design B. Design A is used for Physics achievement test and design B for Mathematics achievement test. The 310 students (90 for design A and 220 for design B) from Grade 11 from two selected high schools of Yangon City Development Area participated in this study. It was found that scaled score means and standard deviations of Form X were nearly equal to the raw score means and standard deviations of Form Y in design A. In the procedure of linear test equating design B, it was observed for both samples that the mean values of the score distributions for transformed scale are greater than the scores of original test form and it has almost 10 point difference. As to the variability of the distributions of transformed scores, it is less scattered than that of the original test scores. The results reveal that the raw-to-scaled scores relationship yields fairness and equity in scoring and gives guarantee to be comparable one form to another to determine the achievement level of students.

Keywords: scoring, linear test equating, scaled scores

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