

Public Abstract

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Estimating Reliability Under a Generalizability Theory Model for Writing Scores in C-BASE

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Reliability appraisal was done on the writing scores in *College Basic Academic Subjects Examination (College BASE)* by both the traditional and modern means of reliability estimation. Correlational analysis, generalized analysis of variance and classical reliability analysis were conducted on the writing scores obtained by a group of collegians. The traditional means of reliability appraisal, under Classical Test Theory (CTT), looks at the item and scale characteristics including item discrimination indices and Cronbach's alpha. The modern means used in this study was the Generalizability Theory (G theory). A Generalizability study (G study) based on the two writing skills comprised of eight multiple-choice items each was conducted to decompose the total observed score variance. The G study design used in this study was  $p \times (i : t)$ , where  $p$  refers to the persons effect and is the object of measurement,  $i$  refers to the test items and is a random effect, and  $t$  represents the writing skills and is a fixed effect. This study also compared and contrasted results from the traditional reliability analysis and the G study. The Generalizability coefficient from the G study was close to the Cronbach's alpha from the classical test theory. About 60% of the observed-score variance in the multiple-choice writing items in *College BASE* was due to the persons effect.