

Big Five Personality Test – An Investigation on the Quality of Data

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Abstract

This paper investigates the data quality for the ‘Big Five’ personality test conducted among 899 students from University of Malaysia Sarawak. For that purpose, we study the differential response to the reversed items in multidimensional instruments in the “Big Five” personality trait scales. Dealing with a real social science or psychometric data requires a proper ways of dealing with issues related to reliability and validity measurements. Here, Principal Component Analysis (PCA) was conducted to detect the structure in the relationships between variables, items and individuals using biplots to display the data. We expected all the

statements which measured the same dimension would project the same direction in the biplots, once the score of negative statements was reversed to agree with positive statements. While this expectation was almost true for the variables with no negative statements, however for the variables with positive and negative statements, the biplots showed contradictory patterns. These findings provide an insight into the existence of an inconsistency of responses, which leads to reliability and validity issues. In order to study this problem, further analysis was done in various groups according to gender, faculties, response and so on. Our aim from these analyses was to identify the group of respondents who gave inconsistent responses which caused reliability and validity problems.

Keywords: *Big-Five Personality Traits, Principal Component Analysis, Reversed Items, Validity and Reliability Test*