

ABSTRACT

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In Sri Lanka, intelligence tests have been in use for about half a century. They were utilised for educational and administrative purposes. Out of these tests, the majority were neither systematically constructed nor properly validated. The very few qualitative attempts were only research oriented exercises, except the test developed (before 1956) by Prof. J.E. Jayasuriya. It is still in use at the classroom level. Construction of an intelligence test systematically and validating it for a target student population is a felt need in the field of education in Sri Lanka today. This measuring tool has to be flexible enough to serve as an instrument which gives a global idea on the students I.Q. and at the same time provide a descriptive analysis on the qualitative and quantitative aspects of students' learning abilities. The present attempt to construct and validate an ability scale suitable for students of 12-13 years of age in Sri Lanka is aimed at achieving this need.

For clarity of conceptualisation a discussion on various definitions of intelligence, its nature and some significant standardised instruments for measuring intelligence are highlighted. In this research Vernon's operational definition on intelligence was utilised. Further, it was decided to construct the test on the lines of British Ability Scales, based on criterion - referenced methodology, using Rasch's statistical concepts, which leads to a norm-free and sample-free assessment.

Ten scales were identified for the battery. Constructed items were pre-tested three times using smaller samples, before administering them on an islandwide sample. Item selection was done mainly on the basis of Rasch Indices which fall into the category of Item Response Theory.

But in addition, classical indices such as discrimination

index, r_{pb} and K.R.20 were also used. Age norms were calculated for all the sub-tests, dividing the sample into two groups, 12:0 - 12:6 years and 12:7 - 13:0 years. In addition to Rasch ability values (with their S.E.), classical indices such as Percentile Rank Z score and T score were also calculated for each and every raw score of a test.

The tests had K.R.20 values ranging from +0.46 up to +.91. Using the Tables of Norms and Abilities a record of students' ability levels on various tests can be obtained and interpreted either on a norm based or on a criterion based approach. By converting the raw scores into an average T Score the students' overall I.Q. level can be assessed and interpreted.

Finally it is recommended that this test battery can be used for diagnostic and prognostic purposes for the age group 12:0 - 13:0 years.