



Test Development for Grade Eight Students: A Paradigm Shift from Classical Test Theory to Item Response Theory

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Abstract

In India to achieve universalisation of elementary education, a large number of schools have been opened and upgraded with an emphasis on enhancing access and increasing enrolment of the students in the classes, retention of the students enrolled and reducing the dropout rate at the primary level. *Sarva Shiksha Abhiyan* (SSA), the flagship programme of Government of India, has succeeded in achieving most of these targets. The quality aspect, the most challenging one, is being addressed now. Amongst all the factorial determinants of the quality of education, 'learning achievement' is probably the most vital because this is most easily perceived and captured as an indicator of the health of the educational system. The achievement level of the student, class, school, or the state provides the stakeholders and policy makers, a measure of quality of inputs provided. This has necessitated the conduct of periodic National Achievement Survey at the different stages of school education in a meaningful manner. National Council of Educational Research and Training (NCERT), an apex body in the field of school education is engaged in conducting National Achievement Surveys. It is about a decade ago that the Ministry of Human Resource and Development (MHRD) in India constituted the Achievement Surveys as one of the indicators of success for the *Sarva Shiksha Abhiyan*. Three cycles of study were anticipated; each to include three subject matter i.e. the language, environmental science and mathematics. The first cycle called the baseline survey was completed in 2002, and the second, midterm survey was done in 2005. In both these surveys Classical Test Theory (CTT) was used for reporting the results. Internationally, in all large scale studies like PISA, TIMSS, PIRLS etc. item response theory (IRT) is extensively used due to its utility and benefits. The main aim of this paper is to find out the improvement, especially in test development as a result of using IRT. The fundamental characteristics of both i.e. IRT and CTT are also being discussed in this paper with an aim to contrast and compare their parameters in the interpretation of the results of the achievement test. This present study is an exploratory investigation of the consequences of using a complex test and item analysis approach in a situation that historically has used a simple conventional approach. Does the increase in complexity and difficulty associated with the use of IRT pay significant dividends in improving the tests? This was the question which the study proposed to investigate.