Correlation between literacy and numeracy screening test and children cognitive level

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ABSTRACT: This research is conduct to determine the validity of literacy and numeracy screening test. McCarthy Scale of Children Abilities will serve as a measurement scale for children cognitive level. Besides, this research also focuses on level of student performance and differences between literacy and numeracy screening tests performance. Quantitative analysis will be used in the research: First, Pearson Product Moment is used to find the correlation between the screening test and student cognitive level. Secondly, mean and charts are used to analyze students’ performance. Lastly, paired t-test is used to find the difference between literacy screening test and numeracy screening test. An interview session will be conduct with teachers regarding the quantitative results. The interview session serve as a supplement method to help researcher obtain holistic point of views.

Keywords: Literacy, Numeracy, Screening Test, Cognitive level

1 INTRODUCTION

Ministry of Education in Malaysia has implement literacy and numeracy screening test in primary school all around the nation to ensure all students mastered the basic learning skills in their first three years of learning in primary school. This screening test was implemented in all primary schools in Malaysia since year 2010. Under the screening test, there is two parts of areas being assess: Literacy and Numeracy.

In literacy screening test, students will be test on their ability to read, write and understand words and simple and complex sentences in Malay language and to apply that knowledge in daily learning and communication. Besides, MOE also set a measurement standard for 3 years of primary schools in read, write and understanding. In year 1, students should able to understand minimum 500 words and compose simple single sentence. In year 2, students should able to understand minimum of 800 words and compose simple sentences and compound sentences with conjunctions. In year 3, students should able to understand minimum 1000 common words which are easy and compose simple sentences and compound sentences with conjunctions in a short paragraph (LINUS 2010).

Numeracy is defined as the ability to read, write, count and arrange number up to 1,000, be competent in mathematical operations of addition, subtraction, multiplication and division, and be able to apply these in money, time and length operations. There are three components being assess in numeracy screening test. First, read, write, calculate and organize (in order) the whole number, second is the basic operation and third is application of numeracy skills in daily life (LINUS 2010).

After 4 years of implementing literacy and numeracy screening test in Malaysia educational system, researcher found that students’ performances are not consistent. The Ministry of Education aimed to achieve both literacy and numeracy rates of 90%. Unfortunately after 4 years of implement this screening test in primary schools only year 2011 result was achieved the target set by the Ministry of Education.

Data collection from District Education Office shows percentages of students mastered literacy constructs are not consistent. Students have high passing rate in literacy screening test at the first two years of implemented this screening test. In year 2010, data shows 87.21% of student mastered literacy screening test. In year 2011, data shows significant increment in student mastered literacy screening test which is 92.46%. But, in year 2012, percentage of student mastered literacy screening test has decreased 8.62% to 83.84%. In year 2013, 85.31% of student mastered the literacy screening test.

Due to the non-consistency of student performance in literacy screening test, research on level of student performance in literacy screening