THE CONCURRENT VALIDITY OF MOCK EXAMINATIONS CONDUCTED BY A NIGERIAN PRIVATE SECONDARY SCHOOL

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Abstract
Achieving test validity is an essential concern in test development, particularly when a test is used for an important purpose. Conducting mock examinations for students in the terminal classes of Senior Secondary Schools (SS3) is fast becoming the norm in Nigeria as various school managements are persuaded that such examinations do not only ascertain the level of readiness of their student for the summative and matriculation examination conducted by independent examination bodies, but also enhances their capacity for the impending external examinations. It is against the backdrop of the perceived significance of mock examinations this study sought to ascertain the concurrent validity of the Mock examinations, conducted by a Nigerian private secondary school, with Nigeria's Joint Admission Matriculation Board Unified Tertiary Matriculation Examination [JAMB-UTME]. The ex-post facto research design was used. The data collected was subjected to Pearson product moment correlation coefficient. The results showed that that the Mock examination developed by the Nigerian Private Secondary School had a concurrent validity index of 0.50 (@ $p<0.01$ and $N=150$) with the more standardized JAMB UTME in the 2012/13 session and a concurrent validity index of 0.59 (@ $p<0.01$ and $N=150$) during the 2013/14 session. Recommendations to enhance the quality of Mock examination were made.

Keywords: Concurrent validity, Mock examination, Joint Admission and Matriculation Board Unified Tertiary Matriculation Examination, Private Secondary School

INTRODUCTION

Reliability and validity are essential concerns in test development, particularly when a test is used for an important purpose. Test users are concerned about the accuracy of tests in measuring what they purport to measure fulfills. To ensure that test results are useful to the test users, evidence is needed to support the appropriateness, accuracy and relevance of test scores. According to Messick (1995), many test developers accept the responsibility of providing general validity evidence of their test, but very few actually do it. Weir (2005) further reported that while most examinations claim different aspects of validity, they often lack sufficient evidence to support inferences made.   Apparently, validity is the most important criteria in a test quality. If a test has poor validity then it does not measure the content and competencies adequately. When this is the case, there is no justification for using such test.   Adeyegbe (2004), submitted that tests used by various public examination boards are often better developed than the ones prepared by the teachers in the school setting, university inclusive.

There are several ways to estimate the validity of a test. This includes face, construct, convergent, content, predictive, discriminant, concurrent validities etc. However, the focus of this study is concurrent validity. *Concurrent validity* refers to the degree to which a measure is correlated with other standardize measures that it is theoretically measuring the same trait as the new test (Dardouri, Gharbi, & Selmi, 2014). Stated differently, Hood and Johnson (1997) further asserted that concurrent validity seeks correlation between two tests, measuring the same trait, which are almost simultaneously administered. Concurrent validity is demonstrated when a test correlated well with a measure that has been previously validated. For example, Workers competence test may be administered to a group of workers and the test scores can be correlated with the ratings of the workers` supervisors taken on the same day or in the same week. The resulting correlation would be a concurrent validity coefficient.

However, the problem with this type of validity evidence, as Moller (1982), points out, is that we need to check whether or not the test or criterion is valid. If they are not valid or not designed to measure the same construct, then one cannot claim that a test has validity because it correlates highly with another test or external criterion of performance. Concurrent validity can be established from one set of measure by correlating them with a second set of measure gathered in the same time frame and generally accepted to be measuring the same construct (Gay, Mills and Airasian, 2012).

In the current study, the two sets of measures chosen to determine concurrent validity are the Mock examination scores and the JAMB examination scores of students from a Nigerian private secondary school in two consecutive sessions. The Mock examination is a school-based achievement assessment for students preparing for the West African Examination Council and National Examination Council examinations). The mock examination serves the following purposes:

1. Most teachers and schools use the mock result to gauge their students and develop more effective remedial strategies.
2. Mock examination put students in an examination mood and prepares them on the requirements of the main national examinations.
3. The methods which students use in answering mock examination questions, gives them a bearing on how they are likely to answer actual examination questions, hence giving the teacher an idea on how to correct some of their mistakes.
4. Mock examinations help students to overcome nervousness and anxiety during examinations.

Bunza (1999), reported that the integration of mock and other forms of continuous assessment into the final examinations has gained momentum in several countries within and outside Africa. The best examples in Africa are in South Africa and Nigeria, where 25% and 30% respectively of the final mark given to a student is the continuous assessment mark. Okonkwo (2003) further argues that such an assessment should yield the true measure of the students` achievement. In addition to certification of candidates, a major function of examination such as WASSCE and NECO-SSCE is to serve as an entry requirement for admission into tertiary institution. The major criterion for admission into universities in Nigeria has been success in WASSCE or NECO-SSCE and the JAMB-UTME. A candidate with a very high score in the examination is therefore likely to be admitted into a university. Strangely, Kale (2004) reported that the best performance at first year university was achieved by students with lower JAMB-UTME scores. It is therefore important that the validity of these examinations be measured.

Validity of Mock and Public Examinations

The validity of a test or an examination can be viewed as the accuracy of specified inferences drawn from its scores. Several studies on criterion related validity have continuously placed so much emphasis on the predictive and not much is mentioned of the concurrent, with researchers having divergent findings in both mock and public examinations. For instance, Njabili (1997) found that mock examination scores are not realistic predictors for performance in actual examination. Similarly, Obioma and Salau (2007), found that secondary school examination scores poorly predicted students' academic performance in the university. Adeyemo (2008), found negative inverse correlation of JAMB-UTME scores with some external criterions that were investigated. Omodara (2004), Oluwatayo (2003), also confirmed the low predictive power of JAMB-UTME scores. While Adeniyi, Araoyo, Amali, Eru, Ojabo and Alao (2010), found that there was no correlation between JAMB-UTME scores and students' performance in the first two years of medical school. Similar findings were also reported by Umo and Ezeudu (2010).   However, Omirin and Ale (2008), found that English and Mathematics Mock examination scores tend to correctly predict the success of students in their final examination.

Concurrent Validity

Studies establishing the correlation between a particular test and established criterion appear scarce. From the available literature, the following are discussed. Herbert, Bellack, and Hope (1991), studied the relationship between the Social Phobia and Anxiety Inventory (SPAI) and several self reported measures of social anxiety in a sample of 23 patients. The relationship between the SPAI and other measures of Psychopathology as well as performance during a role play test and an impromptu speech was also examined. The results strongly support the concurrent validity of the SPAI. Couture, Cooper and Royer (2011), in a study establishing the concurrent validity of Boxall Profile and Strength questionnaire in 202 children and adolescent aged between 3-14 years, found a high degree of concordance between the two instruments, with both measures appearing to identify similar behavioral characteristics in the same children.

Similarly a study conducted by Decker (2013), exploring concurrent validity using teaching strategies (named GOLD) and the Bracken school Readiness Assessment found that the teaching strategies (GOLD) demonstrated moderate to high correlation with the Bracken School Readiness Assessment. Furthermore, Douglas (2014), carried out a study to gather evidence contributing to the concurrent validity of instructors final exit grade in an EAP programme and TOEFL ITP. The results indicated a significant moderate correlation. While the results contributed to evidence of concurrent validity, the constructs tested by the TOEFL ITP and represented by instructor assessed final exit grade, appears to diverge in meaningful way. From the foregoing, it is apparent there is the need to examine the concurrent validity of a sensitive preparatory summative assessment like mock examinations. This study chose to do this by correlating students' performance in the Mock examination with a more standardized examination like the JAMB-UTME. This is to provide evidence of concurrent validity of the mock examination. To do this, two hypotheses were raised and tested.

Research Hypotheses
1. There is no significant relationship between students' scores in the 2012/13 Mock and JAMB examinations score in the Nigerian Private Secondary School studied.
2. There is no significant relationship between students' scores in the 2013/14 Mock and JAMB examinations score in the Nigerian Private Secondary School studied.

METHODOLOGY
Study Design
Correlation and ex-post facto designs were employed to conduct this study. The designs are ideal for the establishment of validity studies of this nature. Ex-post facto design is quite relevant to pre-existing data as used in this study.

Population and Sample
The population for this study comprised of all students who graduated from the studied Nigerian Private Nigerian Secondary school in the 2012/2013 and 2013/14 academic sessions. From this population a random sample of three hundred students (one hundred and fifty for each academic year) were used in this study.

Data Collection, Collation and Analysis
The scores of students in the 2012/13 and 2013/14 Mock and JAMB examination were obtained from the school record. The average of scores from four core subjects [English Language, Mathematics, Economics and Biology] was computed for the Mock examination. This was tallied with student's total score in the JAMB UTME using Pearson Product Moment correlation coefficient to test for the degree of relationship. This is one of the theoretically established procedures for deriving concurrent validity, the JAMB UTME being a more standardized examination assessing the same psychological traits of students learning at the secondary school level.

RESULTS & DISCUSSION
The results of the data analysis are presented below based on the study hypothesis.

Ho 1:
There is no significant relationship between students' scores in the 2012/13 Mock and JAMB examinations score in the Nigerian Private Secondary School studied.
Table 1: Pearson's Correlation of the Relationship between Students' scores in the 2012/13 Mock and JAMB examinations score.

		JAMB SCORE	MOCK SCORE
JAMB SCORE 2012/2013	Pearson correlation	1	**.503**
	Sig (2-tailed)		.000
	N	150	150
MOCK SCORE 2012/2013	Pearson correlation	**.503**	1
	Sig (2-tailed)	.000	
	N	150	150

Correlation is significant at 0.01 level (2-tailed)
Table 1 shows a fairly strong positive relationship between students' mock examination score and JAMB examination score for 2012/2013. The value was statistically significant   (r = .503, n =150, p = <0.01). This result suggests that the 2012/13 Mock examination developed and administered in this Nigerian private secondary school has an appreciable concurrent validity.

Ho 2
There is no significant relationship between students' scores in the 2013/14 Mock and JAMB examinations score in the Nigerian Private Secondary School studied.
Table 2: Pearson's Correlation of the Relationship between Students' scores in the 2013/14 Mock and JAMB examinations score.

		JAMB SCORE	MOCK SCORE
JAMB SCORE 2013/2014	Pearson correlation	1	**.586**
	Sig (2-tailed)		.000
	N	150	150
MOCK SCORE 2013/2014	Pearson correlation	**.586**	1
	Sig (2-tailed)	.000	
	N	150	150

  Correlation is significant at 0.01 level (2-tailed)
Table 2 shows a fairly strong positive relationship between students' mock examination score and JAMB examination score for 2013/14. The value was statistically significant (r = .586, n =150, p = <0.01). This result suggests that the 2013/14 Mock examination developed and administered in this Nigerian private secondary school has a more appreciable concurrent validity than the 2012/13 Mock examination.

Recommendation & Conclusion
The core finding from this study is that Mock examinations, as developed in the Nigerian private secondary school investigated in this study, have a fairly high concurrent validity with the JAMB-UTME. Finding from the second hypothesis further show that there is promise of increasing the degree of concurrent as the 2013/14 Mock examination furnished higher concurrent validity than the 2012/13 Mock examination.   This implies that with training of Teachers in the art of test development and standardization, there is tendency to significantly enhance the psychometric properties if the Mock examinations and by extension have a more effective tool for preparing students for success in the 6-year secondary summative examinations. This in turn has the tendency of guaranteeing the students success in the JAMB-UTME which is the gateway examination into tertiary institutions in Nigeria. The effort is also apt to culminate in reducing the student's attrition rate in terms of those who eventually drop out of school due to inability to qualify for admission into tertiary institutions. The implication of this on negative social vices is incalculable. It is therefore strongly recommended that the Mock examinations be encouraged in schools and more concerted training should be organized for secondary school Teachers in the art of development and validation of summative achievement tests, with particular reference to Mock examinations.

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