



Original Research Paper

Vol. 04 Issue 09 Sept - 2021

Manuscript ID: #0490

ASSESSMENT OF THE ENTRANCE EXAMINATION QUESTION (EEQ) PAPER THAT BEST PREDICT STUDENTS' ACADEMIC PERFORMANCES AT NIGERIAN BAPTIST THEOLOGICAL SEMINARY, OGBOMOSO

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ABSTRACT

In any educational system, tests are very important assessment tools. Among other functions, psychological tests are expected to predict the academic outcome of the examinees. The individual test has its own test implication from other tests therefore this study was determined to assess the entrance examination paper that best predict students' academic performances at Nigerian Baptist Theological Seminary (NBTS), Ogbomoso. This current study adopted a Correlation-Descriptive research design upon a sample of 70 participants who had the required traits for the study through a judgmental sampling technique. Demographic information of subjects was presented with Bar chart and simple percentage. The data were analyzed with the stepwise method of Regression Statistics. The researcher made use of Statistical Package for Social Sciences (SPSS) version 20 and Microsoft Office Excel 2007 for all statistical analysis. One major finding was that the best entrance paper that predicts students' cumulative averages was the English test for both sandwich and regular students'. Meanwhile, the Bible Knowledge and Doctrine could not predict the students' academic success. The study concludes that the subjects that constitute the entrance examination of NBTS predict in varying degrees regarding students' academic achievements. We recommend that every test employed for purposes of selection for admission should be standardized.

KEYWORDS

Entrance Examination Questions, Students Cumulative Averages, Predictive Validity, Best, Academic performances.



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INTRODUCTION

Educational programmes, secular or religious involves ways in identifying knowledge, skills, behaviors, or attitudes of the learner as a result of engaging a learning activity or programme for a particular period, or time. Basic terms such as measurement, evaluation, test and assessment are very common in the process of identifying students' learning outcomes. This study focused on the assessment of students' outcomes in respect to the test (entrance) ability to predict outcome of the students.

There are seemingly different insoluble definitions of assessment. It can be referred to as the systematic collection and analysis of information to improve student learning and programme. Assessment is the process of gathering evidence to make inferences about how students are progressing toward specific goals (Gabriel, 2008). It implies that assessment is the process of gathering evidence of student learning, reviewing the evidence to determine if the students are learning what they are expected to learn, and using this evidence to alter the direction of your course.

Similarly, some scholars asserted that assessment in any educational system determines the extent to which educational learning outcomes are achieved and also the extent to which students have mastered the subject matter (Adedoyin, 2016). Educators made use of assessment methods to actualize objectives of educational task. This pointed out that assessment of student learning is a fundamental phenomenon. It is a significant component of effective teaching and learning in any educational institutions. (Ubulom, Uzoeshi, Amini, & Vipene, 2019), described assessment as the process of collecting, synthesizing and interpreting information to aid in decision making. At school environment, classrooms are busy places where teachers and students effectively interact during teaching – learning process. Every day in the classroom, teachers/educators make decisions about their students, the success of their instruction and classroom climate.

It is crystal clear that assessment is much more than scoring and grading paper-and-pencil tests. Assessment in the classroom situation encompasses the gathering of information relating to learners, information that assist them understand their students, monitor their instructional delivery, and establish a viable classroom community as well as variety of ways teachers collect, organize, analyze, synthesize, and interpret the information so gathered (Ubulom et al., 2019). Based on the principle of decision making in and outside the classroom environment as well as before and after training experience assessment has been used for several purposes. Ubulom et al., (2019) identified that assessment is used for the following: diagnosing students' problem; making judgments about students' academic performance; providing feedback and incentive to students; placement of students; planning and conducting instruction and establishing and maintaining the classroom social equilibrium.

Some empirical studies had shown the dearth of research work regards psychometric properties of selection examinations for instance, (Lievens & Coetsier, 2002) carried out a study on "situational tests in student selection: An Examination of the Predictive Validity, adverse impact, and construct validity (p. 245)." The study sampled 941 participants who attended the Admission Exam 'Medical and Dental Studies' in Flanders. The purpose of this study was to examine the effectiveness of situational tests in student selection.

In this study, the criterion measure was observed as the final scores of the students at the end of the first year medical and dental studies while the predictors in this study were the cognitive ability test, visual information processing test, memory association test, pattern recognition test, and situational tests such as videotaped lecture and the written text with medical subject matter. One of the findings showed that situational tests significantly can predict better than cognitive ability tests, with lecture and text emerging as significant predictors.

The study concluded that the use of situational tests in student selection enables researchers to measure a broad range of skills and abilities. The strength of this study was that situational tests are a useful complement to the traditional student selection procedures in terms of enhancing predictive validity, thereby reducing adverse impact and broadening the constructs measured. "The Role of Psychological Assessment in Predicting Ministerial effectiveness" is another study that has demonstrated moderate validation for the use of psychological assessment in ministerial selection procedures (Malony & Majovski, 1986). This research investigated the relationship of psychological assessments to ordination decisions and to measures of ministerial effectiveness in a sample of church pastors. Result indicated that while psychological assessment recommendations were significantly related to ordination decisions they were not found to be significantly related to measures of ministerial effectiveness. This research did not deal with institutional generated scores.

Kuncel, Hezlett and Ones carried out a study on "A Comprehensive Meta-Analysis of the Predictive Validity of the Graduate Record Examinations: Implication for Graduate Student Selection and Performance" This study examined the validity of the graduate record examination (GRE) and undergraduate grade point average (UGPA) as predictors of graduate school performance. The researchers drawn 1753 sample for the study. The meta-analysis examined eight different criteria which include GGPA (Graduate Grade Point Average), 1st-year GGPA, Comprehensive examination scores, faculty ratings, number of publications-conference papers, number of times publication are cited, degree attainment, and time to degree attainment.

The psychometric meta-analysis method was used for data analysis. The results indicated that the GRE and UGPA are statistically valid predictors of graduate grade point average, 1st-year graduate grade point average, comprehensive examination scores, publication citation counts, and faculty rating (Kuncel, Hezlett, & Ones, 2007). This was done basically for graduate students selection and performance however this current study selects graduate students but for a bachelorette programs called master in divinity (theology)

Another study titled "the predictive validity of the M.A. Entrance Examination of TEFL" was conducted to investigate the relationship between the general English courses offered at the B.A. programme translation studies at Islamic Azad University and the students' general English performance in M.A. entrance examination of master programme in TEFL at Islamic Azad University. This study's population was consisted of all B.A. students of English translation at Islamic Azad University during the year of 2012. Sample of 30 participants were decided to take part in the study.

To elicit data the researcher used their English scores of the general courses offered at IAUKB to students' translation. The scores were collected from the university archives. Standard multiple regression statistics was used to assess the ability of the five measures to predict the students' performance in the university entrance examination. One of the findings was that the general courses

explained 67 percent of the variance in the UEE performances. Of the five measures, only one of them made significant unique contribution to the prediction of the UEE scores. In this it was the M.A. entrance examination that was used as the criterion variable while the general English courses of the B.A. were used as the predictor variable (Jamalifar, Chalak, & Tabrizi, 2014). This suggests that the flexibility of the predictive validity can go two ways depending on the purpose of the study. This study also pointed out that out of the five measures only one was able to statistically predict the entrance examination significantly. The study was conducted in an Islamic university and not a seminary.

It became imperative to observe that multiple paper entrance examinations indicate varying predictive ability and therefore this current study is to assess the entrance paper that best predict students' academic performances.

1. METHODOLOGY

This current study adopted a Correlation-Descriptive research design. The rationale for the choice of this design was the fact that the design attempts to establish cause-effect relationship upon which the independent variable is not manipulated (Awoniyi, Aderanti, & Tayo, 2011). It relates therefore that the independent variables have already occurred. Consequently, this study made use of entrance examination scores of candidates who were admitted and consequentially graduated, having their cumulative student average (CSA) in the Seminary. The Target population for this study was 142 applicants, that is, 59 and 83 applicants for sandwich and regular M. Div. (Th.) programmes respectively. This data was obtained at the archives of the registry of the Nigerian Baptist Theological Seminary, Ogbomoso.

The sample of this study was 70 participants. Regular applicants who were admitted and successfully graduated, and having both the Entrance Examination Average (EEA) and Cumulative Student Average (CSA) was 51 while the sandwich group consisted of 19 participants. A purposive sampling technique was adopted to choose the programme of study and the academic sessions. Meanwhile, judgmental sampling technique was used to select the participants for the study, that is, only those candidates that successfully passed the entrance examination, admitted and passed through the institution and have acquired a cumulative student average at the end of their programmes were judged to be qualified for the study.

The major study instrument was a record/documentary. The record of entrance examination average scores of those admitted into the institution as well as the cumulative student average of the sample. These records were obtained from the registry of the institution. These adopted records showed the codes of participants, CSA, EEA, English scores, Bible Knowledge and Doctrine Scores, gender, marital status and age of the participants.

Also, the study made use of interview as instrument for data collection. The researcher prepared an interview guide. The interview guide contains personal data of interviewee such as name, age, designation/position and year of service while the main construct consisted of five open-ended questions to retract response from the interviewees.

The instrument used was official records obtained from the registry of the seminary thus the certified true copy enabled the researcher to consider the instrument valid and reliable.

Demographic information of subjects was presented with Bar chart and simple percentage. The data was analyzed with stepwise method of Regression Statistics. The researcher made use of

Statistical Package for Social Sciences (SPSS) version 20 and Microsoft office Excel 2007 for all statistical analysis.

2. RESULTS / DISCUSSIONS

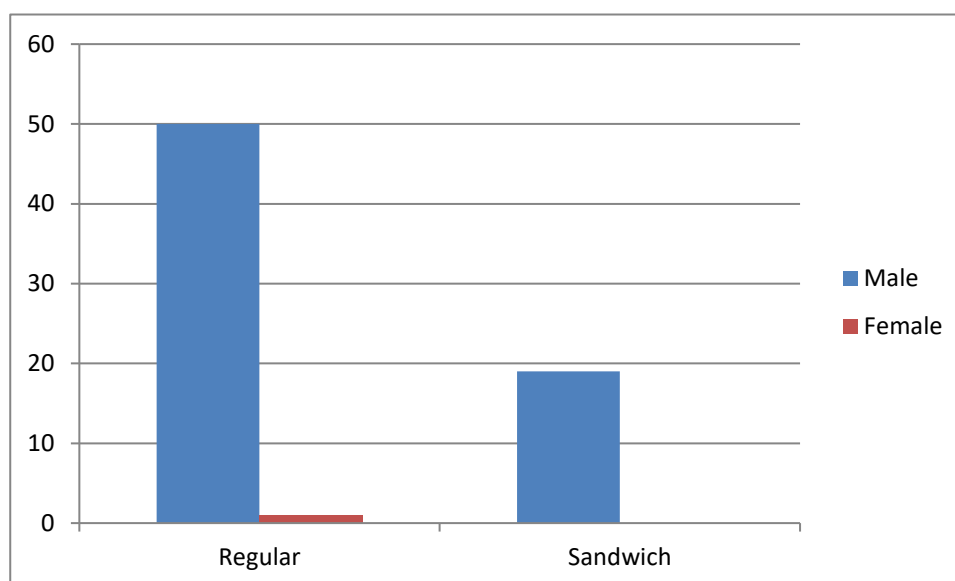


Figure 1: Distribution of Subjects by Gender

A visual look at figure 1 above indicates that out of 51 regular students there were 50 (98%) males while 1 (2%) was female. Also, for the sandwich students 19 (100%) was male. This implies that males are more in seminary education than females.

Research Question: Which entrance paper best predict both regular and sandwich students' cumulative student averages in Nigerian Baptist Theological Seminary, Ogbomoso?

Tables 1 and 2 are used for the interpretation of this research question.

Table 1: Summary of Stepwise Method of Multiple Regression Statistics for Regular M. Div. (Th.)

Variables	Number	Mean	Standard Deviation	
English Test	51	46.41	10.30	
BK & D	51	72.24	12.14	

Correlations

Variable pairs	Number	Correlation	P > 0.05	Decision
CSA vs. BK & D	51	.239	.046	Rejected
CSA vs. English	51	.359	.004	Rejected
BK & D vs. English	51	.270	.028	Rejected

Model summary

Model	R	R Square	Adjusted R Square	Square Change
1	.369	.136	.119	.136

Coefficients^a

Model	Unstandardized coefficients B	Standardized coefficients Beta (β)	t	Sig.
1 (constant)	55.89		18.93	.000
English	.173	.369	2.78	.008

a. Dependent variable (CSA)

Table 1 on previous page consists of four sub-tables from the stepwise method of multiple regression regular M.Div. (Th.) students. The first table displays the descriptive characteristics of the English and Bible Knowledge and Doctrine papers. Regular students had mean and standard deviation of 72.24 and 12.14 respectively in Bible Knowledge and Doctrine examination while for English the regulars had 46.41 and 10.30 as mean and standard deviation respectively. This implies that the regular students performed better in the Bible Knowledge and Doctrine paper than the English paper, that is, $72.24 > 46.41$. Nevertheless, the standard deviation of the students showed that the gap between the highest score and the lowest score was closer in English paper because standard deviation of English is less than that of Bible Knowledge and Doctrine, $10.30 < 12.14$.

The second sub-table showed the pair wise correlations coefficients and indicates the actual significance level for each correlation. That is, CSA and Bible Knowledge and Doctrine has r of .239 which is significant ($P < .05$); CSA and English has r of .369 that is significant ($P < .05$) and BK & D and English has r of .270 that is significant ($P < .05$) for one-tailed test. This implies that both BK & D and English scores are related to CSA of the regular students.

The third sub-table is the model summary showing the best predictor to be the English paper. The English test has R of .369, R square of .136, and adjusted R square of .119 and R square change in statistics of .136. This relates that English test entered in the regression accounts for 13.6% of the variance in the criterion variable (CSA). This prediction is statistically significant at $P < .05$.

The coefficients sub-table showed unstandardized regression coefficient (B) of .173. This implies that every 1 unit increase in English scores level there is an increase of .173 in CSA. Meanwhile, the standardized regression coefficient (β or Beta) is .369. The β or standardized regression coefficient of .369 is significant at .05 as the P value (Sig.) is .008. Therefore, since the $\beta = .369$, $p = .008$, two-tailed, the null hypothesis of 'no significant linear regression coefficient between independent variable (English scores) and Cumulative Student Averages' is rejected. That is, English test becomes the best predictor of the cumulative student averages for the regular students. This also means that the Bible Knowledge and Doctrine test or paper cannot be used to predict students' academic outcome.

Table 2: Summary of Stepwise Multiple Regression Statistics for Sandwich M. Div (Th.)

Variables	Number	Mean	Standard Deviation		
English Test	19	50.63	6.21		
BK & D	19	68.42	9.74		
Correlations					
Variable pairs	Number	Correlation	$P > 0.05$	Decision	
CSA vs. BK & D	19	.248	.153	Not Rejected	
CSA vs. English	19	.459	.024	Rejected	
BK & D vs. English	19	.249	.152	Not Rejected	
Model summary					
Model	R	R Square	Adjusted R Square	Square Change	
1	.459	.210	.164	.210	
Coefficients ^a					
Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B		Beta (β)		
1 (constant)	53.76			9.69	.000
English	.231		.459	2.13	.048

a. Dependent variable (CSA)

Table 2 above consists of four sub-tables from the stepwise method of multiple regression Sandwich M.Div. (Th.) students. The first table displays the descriptive characteristics of the English and Bible Knowledge and Doctrine papers. Sandwich students had mean and standard deviation of 68.42 ± 9.74 respectively in Bible Knowledge and Doctrine examination while for English the regulars had 50.63 ± 6.21 as mean and standard deviation respectively. This implies that the sandwich students performed better in the Bible Knowledge and Doctrine paper than the English paper, that is, $68.42 > 50.63$. Nevertheless, the standard deviation of the students showed that the gap between the highest score and the lowest score was closer in English paper because standard deviation of English is less than that of Bible Knowledge and Doctrine, $6.21 < 9.74$.

The second sub-table showed the pair wise correlations coefficients and indicates the actual significance level for each correlation. That is, CSA and Bible Knowledge and Doctrine has r of .248 which is not significant ($P > .05$); CSA and English has r of .459 that is significant ($P < .05$) and BK & D and English has r of .249 that is not significant ($P > .05$) for one-tailed test. This implies that both BK & D scores and CSA has no statistically significant relationship. Also, BK & D scores and English scores has no statistically significant relationship while English scores of sandwich students showed a statistically significant relationship with CSA of the sandwich students.

The third sub-table is the model summary showing the best predictor to be the English paper. The English test has R of .459, R square of .210, and adjusted R square of .164 and R square change in statistics of .210. This relates that English test entered in the regression accounts for 21.0% of the variance in the criterion variable (CSA). This prediction is statistically significant at $P < .05$.

The coefficients sub-table showed unstandardized regression coefficient (B) of .231. This implies that every 1 unit increase in English Scores level there is an increase of .231 in CSA. Meanwhile, the standardized regression coefficient (β or Beta) is .459. The β or standardized regression coefficient of .459 is significant at .05 as the P value (Sig.) is .048. Therefore, since the $\beta = .459$, $p = .048$, two-tailed, the null hypothesis of 'no significant linear regression coefficient between independent variable (English scores) and Cumulative Student Averages' is rejected. That is, English test becomes the best predictor of the cumulative student averages for the sandwich students. This also means that the Bible Knowledge and Doctrine test or paper cannot be used to predict students' academic outcome.

The study determined the best predictor of the entrance examination papers. It has been observed that the entrance examination consists of the English language test, bible knowledge and Baptist doctrine test and oral interview test. The study which was limited by the non-availability of the oral scores analyzed only the English scores and Bible knowledge and Doctrine. The study after the regression analysis observed that the English language test was the best predictor of students' outcomes. The stepwise method of regression removed the bible knowledge and doctrine scores as being poor predictor.

Meanwhile, the descriptive statistics of the both test indicates that candidates (regular and sandwich) obtained higher score on Bible Knowledge and Doctrine test than the English test. It is crystal clear that since the institution is a seminary, candidates may have better knowledge in Bible Knowledge and doctrine than the English test. So the BK & D test can be described as a familiar test which cannot predict the academic performance of the students in the future. On the contrary some studies advanced that entrance examination conducted by institution as a screening criterion for admission could not significantly predict the student academic success (Queensoap, Arogo, Memory, Ogbari, & James, 2017).

This is not farfetched for the how the test is being constructed and administered. The theory of test development especially latent trait theory or item response theory emphasizes on estimating a

student's location on a vertical scale in relation to anchor points previously set (Onunkwo, 2002). This means that test based on latent trait theory does not border on "how many" a student achieved from a domain of task, but "how much" that student mastered on a dimension representing a trait. Selection examinations are expected to be standardized if they are to ascertain its purpose of assessment. It is obvious that the entrance examination of the NBTs did not give consistent results hence its reliability and validity is questioned.

3. CONCLUSION

Considering the findings of the study, the English test as part of the entrance examination questions has best predictive validity than the Bible Knowledge and Doctrine test in respect to cumulative student average performances of both sandwich and regular students. This therefore suggests that the English language items best predict outcome of students than the bible knowledge and doctrine test items of the entrance examination questions of Nigerian Baptist Theological Seminary, Ogbomosho.

4. Recommendations

Following the findings of this study and the conclusion drawn, the researcher recommends that:

1. Both English language and Bible Knowledge and Doctrine question items should be standardized for consistent assessment, measurement and evaluation of the product of the institution
2. Measurement and evaluation experts should link non-secular institutions by way of advocacy, staff development and research to improve on the integrity of their examinations to make the result reliable and acceptable.
3. Non-secular institutions should consult measurement and evaluation experts in order to help them produce item banking where pool of standardized question items will be kept for the assessment of candidates for purpose of admission into the institution.

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