

ARE UTME AND PUTME GOOD PREDICTORS OF STUDENTS' ACADEMIC PERFORMANCE IN THE UNIVERSITY? THE CASE OF KADUNA STATE UNIVERSITY, KADUNA, NIGERIA.

Bala Dogo¹, Cyril Kanayochukwu Ezeamaka², Adebo Adepetu¹, Ajibuah Joel², Maharazu Ibrahim¹, Sa'adatu Abdulkadir¹, Bako Sunday Samuel¹, Victor Gimba¹, Mwanret Gideon Daful², Nathaniel Atamas Bahago¹, Mendos Dogo¹, Nathan Yerima¹ and Zaharadeen Isah¹

¹Kaduna State University, Kaduna, Nigeria

²Nigerian Defence Academy Kaduna, Nigeria

*Corresponding Author Email Address: baladogo2002@yahoo.com

ABSTRACT

This paper has investigated the extent to which the Joint Admission and Matriculation Board's (JAMB) Unified Tertiary Matriculation Examination (UTME) and Kaduna State University Post Unified Tertiary Matriculation Examination (PUTME) are predictors of students' academic performance in Kaduna State University, Kaduna, Nigeria. The data on the student's scores for JAMB's UTME, and PUTME, were collected from Kaduna State University's (KASU) Information Communication Technology and Management Information System. The study also employed field survey using a well-structured questionnaire administered to the students to collect data on their Cumulative Grade Point Average (CGPA) and other information. Purposeful sampling was adopted in selecting 240 students. This study used descriptive and inferential statistics for data analysis. The study revealed that candidates scored higher in PUTME than in UTME. The mean score of students in PUTME stood at 249.60, which is higher than the UTME mean scores of 208.24. The result of the scores for UTME reveals that the highest mean score has been increasing over the years with the highest individual score being recorded in 2015. The study also revealed a significant relationship between UTME and PUTME at 0.05%. The prediction of students' CGPA from their performance in UTME and PUTME in KASU reveals that UTME and PUTME are good predictors of students' final class of degree. In this study, JAMB UTME and KASU PUTME when taken separately, significantly predict student's CGPAs in KASU. The study concludes that UTME and PUTME can be described to be the predictors of student's academic performance in KASU.

Keywords: Academic, Performance, KASU, Predictor, PUTME, Scores, JAMB's UTME.

INTRODUCTION

Kaduna State University was established in 2005. Since 2014/2015 academic session, the Kaduna State University (KASU) discontinued the Post Unified Tertiary Matriculation Examination (PUTME) for students admitted into KASU, thus, advancing Unified Tertiary Matriculation Examination (UTME) of Joint Admission and Matriculation Board (JAMB) as sole criterion for admitting students into KASU. This is in spite of the fact that several studies had found significant disparities between candidates' (a) UTME and PUTME scores (Afolabi, Mabayoje, Togun and Oyedeyi, 2007; Omirin, 2007; Ifedili and Ifedili, 2010; Ajala, 2010; Umo and Ezeudu, 2010; Akintola, 2013; Ayuba, 2015; Oladejo, 2016) and (b) UTME scores and performance of students at 100 levels (Bangboye, Ogunnowo, Badru and Adewoye, 2001; Kale, 2004; Ojirinde, 2009; Igwue and Adikwu, 2012; Joe, Kpolovie, Osonwa and Iderima, 2014) and (c) UTME

scores and their final Cumulative Grade Point Average (CGPA) scores in the university (Uhunmwangho and Ogunbadeni, 2004; Salahdeen and Murtala, 2005; Obioma and Salau, 2007; Eze, 2014; Okobai, 2015). This has brought to the front burner the critical question: Is UTME a reliable predictor of academic performance of KASU Students? Providing an objective answer to this question is the problem of this study. Disparity between students' UTME score and performance in the university led to the PUTME. This generated a lot of criticism prompting the need to investigate the relationship between UTME and PUTME scores.

The Unified Tertiary Matriculation Examination (UTME) used by the Joint Admissions Matriculation Board (JAMB) for admitting students into Universities in Nigeria has been severally criticized as a poor instrument for predicting academic performance of students. The critiques results shown disparities, which is a better predictor of students' performance in the university between: have cited wide

- i. The UTME and Post Unified Tertiary Matriculation Examination (PUTME) screening scores; and
- ii. UTME scores and progress/performance of especially those candidates with exceptionally high UTME scores (Agbomifoh and Dimowo, 1985; Ogonor and Olubor, 2002).

The persistence and veracity of the criticisms eventually compelled the managements of the Universities in Nigeria to introduce the PUTME screening exercise to complement UTME. This development has also evoked intense criticism, generally from the public, but particularly from parents of prospective students. Expectedly, the two admission criteria have become subjects of various studies. Whereas, majority of the exploratory studies reported statistically significant differences between UTME and PUTME scores, based on the Student-T test; the Pearson Product Moment Correlation Coefficient (r_p) of the two sets of scores was not only weak but it was also inverse and insignificant (Umo and Ezeudu, 2006; Patrick, 2010; Tosanwumi, 2011; Eze, 2014; Uhanmwangho and Ogunbadeni, 2014).

Igwe and Adikwu (2012) found a significant relationship between students' scores in three examinations, namely: UTME, PUTME, and 100-Level Psychology course, Faculty of Agriculture, Federal University of Agriculture, Makurdi, and thus concluded that the UTME has a predictive validity for performance in the university. Idika (2015) has investigated parents' concern about the use of computer-based-testing (CBT) for UTME in Cross River State.

Other studies have extended their examination to the relationships that exist between UTME/PUTME scores and the Cumulative Grade Point Average (CGPA) of students in various programmes. These include Tosanwumi (2011) who conducted a survey and reported that there existed a negative correlation between scores obtained by candidates

in the UTME and their respective CGPA as against the positive correlation that was found between PUTME and CGPA of the same set of students. Similarly, Joe, Kpolovie, Osonwa and Iderima (2014) compared the CGPA of graduates admitted through UTME, PUTME and Preliminary Programmes of Basic Studies Programme of School of Science Laboratory Technology, University of Port Harcourt and found that graduates admitted through the UTME/PUTME did better. This finding has introduced another dimension to the relative strength of UTME/PUTME as performance predictor debate. Also Eze (2014) used the 'p and Partial Correlation Coefficient to examine the strength of UTME as a predictor of students' final grades in the Faculty of Health Sciences and Technology, University of Nigeria, and found that UTME was a poor predictor of students' final grades in the faculty.

Uhienuangho and Ogunbadeni (2014) adopted Pearson correlation to compare the relative strength of UTME and PUTME as performance predictor in five faculties at the University of Benin. The study revealed a very low but statistically significant negative correlation between UTME and PUTME scores. The study therefore concluded that high marks in UTME did not reflect the academic performance of students that were admitted based on merit only from UTME scores, therefore such admission criterion could not bring into the university the best qualified students.

A major shortcoming of virtually all the studies reviewed is their limited scope in time and/or coverage. For instance, Umo and Ezeudu correlated UTME and PUTME scores for the 2006/2007-admission exercise of the University of Nigeria, Nsukka in nine (9) programmes in the science, social science, and engineering faculties. Akinola (2013) covered four (4) admission years: 2007/2008-2010/2011 but confined to only the Department of Computer Science, University of Ibadan. Eze (2014) examined the relative strength of UTME and PUTME as academic performance predictor. Patrick (2010) studied the performance of only 214 students admitted into science education through PUTME screening through 2005/2006 to their 300-level year, 2007/2008, in four departments -Biology, Chemistry, Mathematics and Physics in Delta State University, Abraka, and found no significant correlations in the CGPA scores of students admitted through the two sets of criteria.

Joe *et al.* (2014) analyzed academic performance of graduates admitted through UTME/PUTME and the Preliminary programmes Certificate, Basic Studies and School of Science Laboratory Technology, University of Port Harcourt. Results showed that graduates who were admitted through the preliminary programmes performed significantly better than their counterparts who were admitted through the UTME/PUTME in all the faculties except in Agricultural Science and Engineering. Oyelekan (2009) has analyzed JAMB's UTME and PUTME scores of biological science students of Federal University of Technology, Minna, and found a very weak and insignificant relationship between the two. Ayuba (2015) did a comparative analysis of PTUME in KASU using fuzzy logic. The study found that the CPGA of students that had very good performance in mathematics and physics in the PUTME are higher compared to those that scored fail either physics or mathematics but were offered admission into Mathematical sciences programme in KASU.

Finally, the reviewed literature has shown that there are gaps yet to be filled in understanding the predictors of good academic performance in Universities in Nigeria. Also the other indicators of academic performance such mean program completion time, rate of withdrawal from programs, rate of inter-programme transfers and rate of withdrawal from University as a result of poor academic performance have not been studied. The researchers attempted to use various techniques to investigate and also document the relationship existing

between the results of students in one examination and the other. The major lacunae or gap is such that a systematic study has never been conducted for a new University like that of Kaduna State University, which is the essence of this study.

Therefore, this study is aimed at investigating the extent at which JAMB' UTME and PUTME is a predictor of students' academic performance in Kaduna State University, Kaduna, Nigeria. The following objectives will be used to achieve the aim of this study to assess the relationship between students' scores in UTME and PUTME and their overall performance in KASU, to examine the relationship (if any) between the performance of students in UTME and PUTME IN 2008, 2009, 2010, and 2015 in KASU. And also to assess the performance of KASU Students in UTME, PUTME and CGPA, and to examine the extent the JAMB/UTME a predictor of the students' academic performance in KASU.

MATERIALS AND METHOD

Brief History of Kaduna State University

Kaduna State University (KASU) is a state owned institution. KASU was established under the Kaduna State Law Number 3 promulgated on 21st May 2004. The promulgation was a consequence of the obvious and felt need to boost higher education in the State and in Nigeria. Kaduna State University has two campuses, one in Kaduna town and the other in Kafanchan. Academic activities commenced in 2005/2006 academic session at Kaduna campus with 3 Faculties, 17 Academic Departments, 19 Undergraduate Programmes and a College of Basic Studies. At present, the University has 2 Colleges, 2 Schools, 8 Faculties, 51 Academic Departments, 32 Undergraduate Programmes and 54 Postgraduate Programmes in the 2 campuses. According to Directorate of University Advancement-KASU (DUA-KASU) (2018) the university has a student population of 17, 372 with 13785 undergraduates and 3587 Postgraduate students. It has 8 faculties; Faculty of Arts (2012), Faculty of Sciences (4963), Faculty of Social and Management Science (4311), Faculty of Medicine (163) Faculty of Environmental Science (1301), Faculty of Agriculture (437), Faculty of Pharmaceutical Science (314) and Faculty of Continuing Education (284). At the Postgraduate level, the Faculty of Social and Management Science has the highest number of student (2392) and Faculty of Arts has the least (325). According to statistics on number of applicants for admission into Nigerian Universities by Joint Admissions and Matriculation Board for 2017, KASU was the second most-sought-after State University in Nigeria (DUA-KASU, 2018).

The main campus is located in Kaduna Metropolis, which lies between Latitudes 10° 22'N and 10° 40'N of the equator and Longitudes 07° 20'E and 07° 28'E of the Greenwich meridian. The climate is tropical continental comprising of dry harmattan northeast winds and warm, humid southwest winds that usher in the rainy seasons. Vegetation is typically guinea savannah woodland and Sudan savannah grassland. The metropolis comprises of four local government areas (LGAs) namely; Kaduna North, Kaduna South with segments of Chikun and Igabi LGAs. The four Local Government Areas have a combined population of about 1.56 million (KDSG, 2017). The city is experiencing rapid population growth which is believed to be responsible for the increased pressure on public services, infrastructure and challenges such as solid waste management.

Data collected and analysis

The investigation depended exclusively on documentary data mainly recordings of student's scores for JAMB's UTME, Post UTME, and CGPA collected from KASU Information Communication Technology and Management Information System (ICT/MIS), which covered all

applications into KASU. The sample size determined to cover 5% of the population of KASU. The data analysis made use of both descriptive and inferential statistics namely measures of central tendencies (for example mean and spread (standard deviations) and inferential statistical techniques (Pearson product correlation, linear and logistic regression techniques)

RESULTS AND DISCUSSION

The students population shows that the number of candidates applying for admission to KASU has been increasing significantly in 2008 only 495 candidates applied while 10,359 students applied in 2015 a nearly double fold increase showing an increase. Figure 1 summaries the number of candidates who applied to KASU in the 2008, 2009, 2010 and 2015.

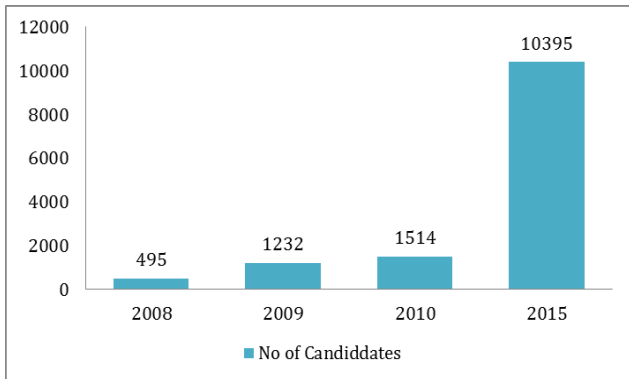


Figure 1: Students Application into KASU.

Performance of Candidates in UTME

The data also reveal that the UTME 2010 has the highest mean scores of 206.75 while UTME 2008 has the lowest mean scores of 195.56 as shown in Table 1. UTME 2015 has the highest scores of 298 followed by UTME 2008 with 289 while UTME 2009 has the lower maximum score of 275. This shows that candidate best individual scores in 2015 and students of 2009 had the lowest scores.

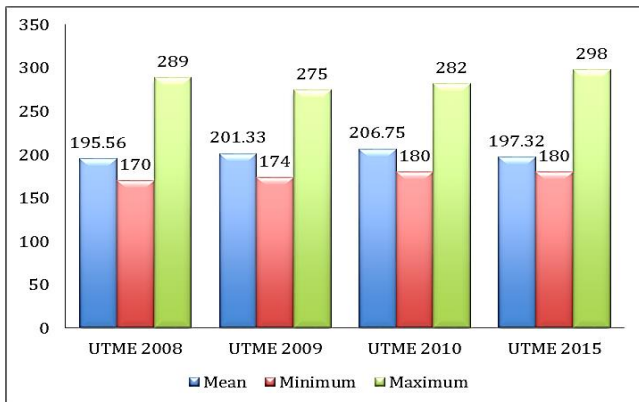


Figure 2: Candidates' Score UTME 2008, 2009, 2010, and 2015
Source: Fieldwork (2018)

The mean scores of candidates in PUTME 2008 has the highest mean scores of 187.85 while PUTME 2010 has the lowest mean scores of 158.89. This implies that the students did better in 2008 than 2008,

2010 and 2015 as shown in Table 3. PUTME 2015 has the highest maximum scores of 340 followed by UTME 2010 with 318 while UTME 2008 has the lower maximum score of 292. This implies that students' best individual scores in 2015 and students of 2008 had the lowest maximum scores.

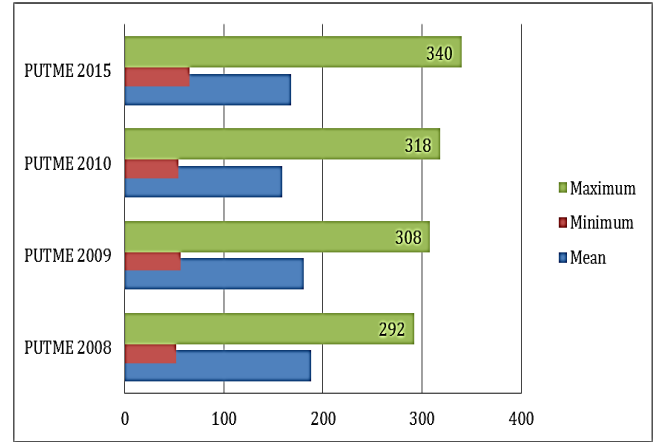


Figure 3: Candidates' Score PUTME 2008, 2009, 2010, and 2015.
Source: Fieldwork (2018)

Relationship between UTME and PUTME

The study reveals that the PUTME scores are mostly higher than UTME as shown in Figure 4. This might be attributed to students writing the JAMB's UTME sometimes before writing WACE with less preparation. The study reveals that 68% of the students scored less 180 mark in the PUTME while 1 out of every 100 scored less than 180 marks in UTME, this is so because the national cutoff mark set by JAMB is 180marks.

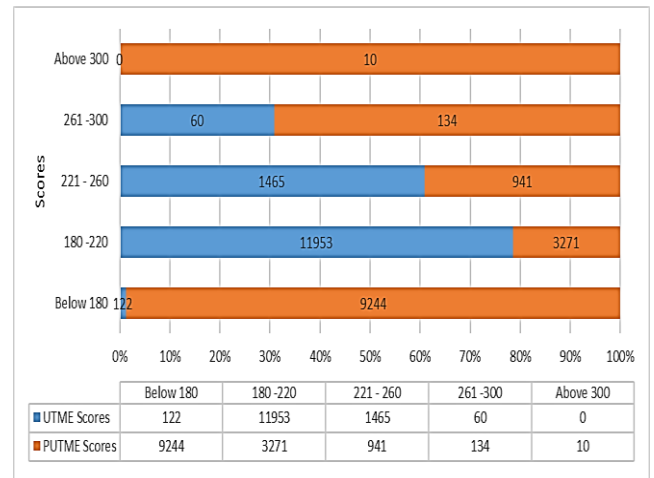


Figure 4: UTME and PUTME Scores by Year of Application into KASU
Source: Fieldwork (2018)

The study investigated the average score of students in UTME and PUTME and observes that only 1 in 500 students scored 281 marks and above while no students scored above 300. However, the cut off score for UTME is 180 marks so the study reveals that 9 out of every 20 students scored below 180 and 28.55% scored between 180 and

200 while 22.87% scored between 201 and 240 and 2.34% scored 241 to 280 as shown in Figure 4.

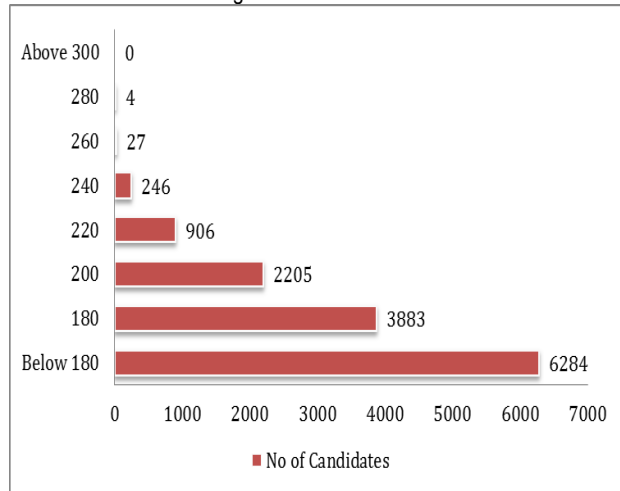


Figure 5: Average UTME and PUTME Scores in KASU. Source: Fieldwork (2018)

The highest mean scores is 206.75 in UTME 2010 while PUTME 2010 has the lowest mean scores of 158.89 (see Table 5).

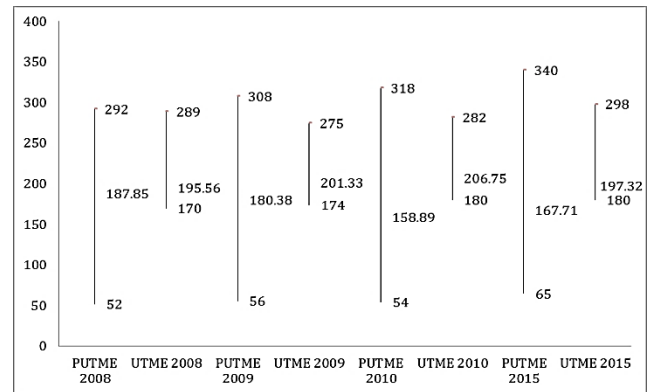


Figure 6: Candidates' UTME and PUTME Score 2008, 2009, 2010 and 2015 into KASU. Source: Fieldwork (2018)

Furthermore, the study reveals that there is significant relationship in the students' performance in UTME 2009 and UTME 2010; UTME 2008 and PUTME 2009; UTME 2009 and PUTME 2009; UTME 2010 and PUTME 2010; UTME 2015 and PUTME 2015; as shown in Table 6. This relationship is significant at 0.01 level. PUTME 2015 is significantly related with PUTME 2010 at 0.05%.

Table 1: Correlation of UTME and PUTME 2008, 2009, 2010 and 2015 in KASU

		UTME 2008	UTME 2009	UTME 2010	UTME 2015
UTME 2008	Pearson Correlation	1	0.02	0.041	0.002
	Sig. (2-tailed)		0.658	0.364	0.968
	N	494	494	494	494
UTME 2009	Pearson Correlation	0.02	1	.076**	0.008
	Sig. (2-tailed)	0.658		0.008	0.776
	N	494	1232	1232	1232
UTME 2010	Pearson Correlation	0.041	.076**	1	0.004
	Sig. (2-tailed)	0.364	0.008		0.862
	N	494	1232	1514	1514
UTME 2015	Pearson Correlation	0.002	0.008	0.004	1
	Sig. (2-tailed)	0.968	0.776	0.862	
	N	494	1232	1514	10359
PUTME 2008	Pearson Correlation	.409**	0.012	0.05	0.056
	Sig. (2-tailed)	0	0.782	0.268	0.211
	N	494	494	494	494
PUTME 2009	Pearson Correlation	-0.006	.326**	-0.002	0.019
	Sig. (2-tailed)	0.897	0	0.937	0.499
	N	494	1232	1232	1232
PUTME 2010	Pearson Correlation	0.027	0.037	.327**	-0.026
	Sig. (2-tailed)	0.547	0.192	0	0.318
	N	494	1232	1514	1514
PUTME 2015	Pearson Correlation	0.047	0.016	-0.019	.474**
	Sig. (2-tailed)	0.301	0.583	0.459	0
	N	494	1232	1514	10359

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed)

Performance in UTME, PUTME, and CGPA

The result also reveals that the UTME 2010 has the highest mean

scores of 206.75 while UTME 2008 has the lowest mean scores of 187.85 as shown in Figure 2. UTME 2015 has the highest individual score of 298 followed by UTME 2008 with 289 while UTME 2009 has

the highest individual score of 275. This shows that candidate best

individual scores in 2015 and students of 2009 had the lowest scores.

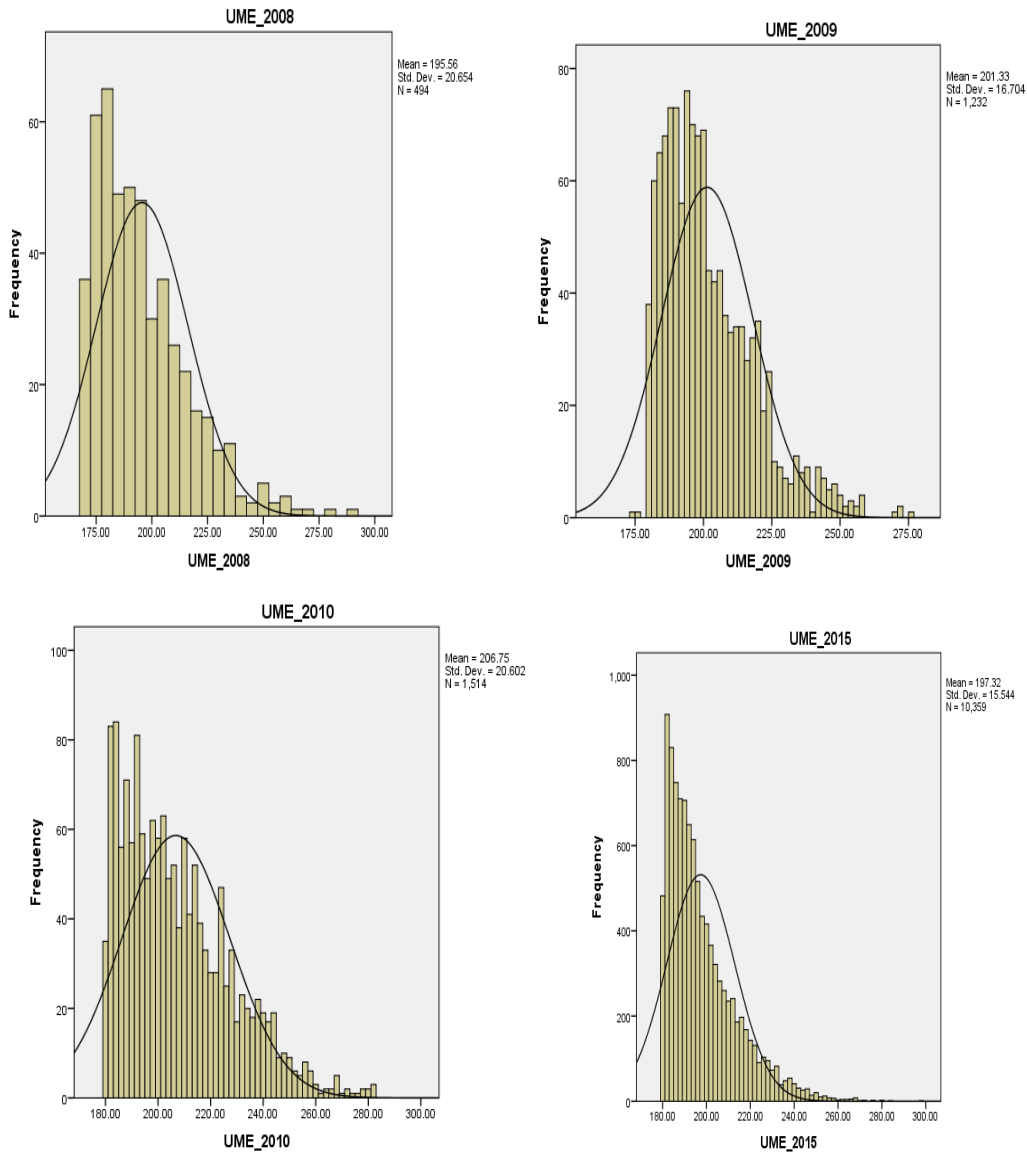


Figure 7: UTME SCORES IN 2008, 2009, 2010, and 2015.
 Source: Computed From KASU MIS Records (2018)

The mean scores of candidates in PUTME 2008 has scores of 187.85 while PUTME 2010 has the lowest mean scores of 158.89. This implies that the students did better in 2008 than 2009 2010 and 2015 as shown in Figure 3. PUTME 2015 has the highest maximum scores

of 340 followed by UTME 2010 with 318 while UTME 2008 has the lower maximum score of 292. This implies that students' best individual scores in 2015 and students of 2008 had the lowest maximum scores

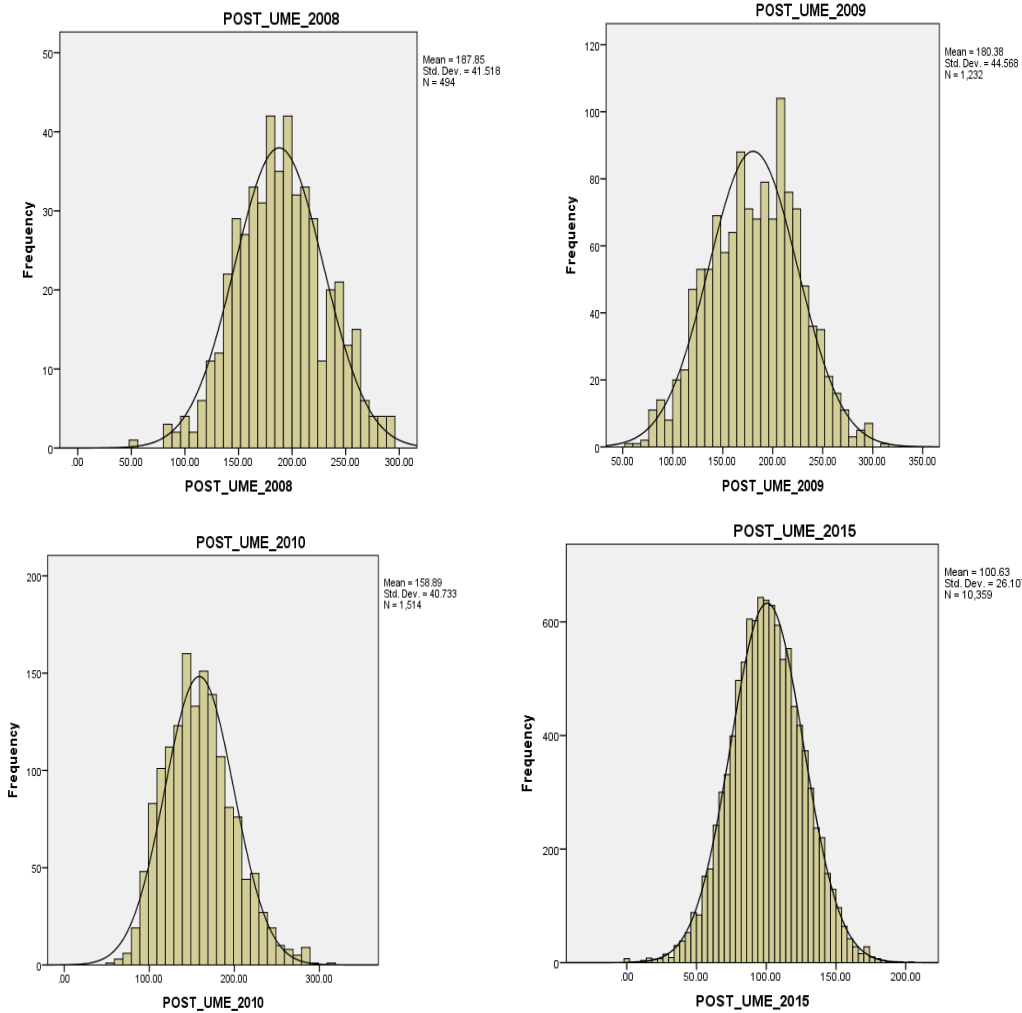


Figure 8: PUTME Scores IN 2008, 2009, 2010, and 2015.
 Source: Computed From KASU MIS Records (2018).

The mean score of students in PUTME is 249.60, which is higher than the UTME mean scores of 208.24. This implies that student seem to do better in PUTME than UTME and a further probe indicates that most students write UTME before writing their final secondary school certificate examines. There are median values for the UTME and PUTME for the respective years as shown in Table 1. Table 1 contains the means and medians of the variables UTME and Post UTME (PUTME) for the respective years (2008, 2009, 2010, and 2015).

UTME and Post UTME as Predictor of the Students ‘Academic

Performance

Kaduna State University students’ academic performance from 100–400 levels and Final CGPA correlated with their JAMB’s UTME and KASU’s PUTME. Sign test was used to compare the differences in the candidate’s performance in the two examinations (UTME and PUTME) in Table 4.

Table 2: Correlations between UTME, PUTME, and Final CGPA

Variables	UTME	POST UTME
CGPA 100L	0.0338	0.1900
CGPA 200L	0.1484	0.1938
CGPA 300L	0.3173	0.0886
CGPA 400L	0.0772	0.0629
Class of degree	0.0323	-0.0595

Values in bold are different from 0 with a significance level alpha=0.05

Table 4 revealed that UTME has a positive relationship with the CGPAs and Final Class of Degree. However, the relationship with 200L and 300L shows a statistically significant and 300L has the strong relationship with UTME compare with others. In addition, post UTME show a positive relationship with the CGPAs while negative

relationship with the final class of degree. Although, only 100L and 200L in this case shows a statistical significant relationship with the Post UTME.

Table 3: Linear Regression Model for CGPAs

	CGPA 100L	CGPA 200L	CGPA 300L	CGPA 400L
R ²	0.0363	0.0482	0.1008	0.0080
F	4.4611	6.0072	13.2849	0.9551
Pr > F	0.0125	0.0029	< 0.0001	0.3863

Table 5 revealed that the UTME and post UTME served as the predictors of student performance from 100L to the 400L. They were able to explain of about 4% of CGPA 100L, 5% of CGPA 200L, 10% of CGPA 300L and 1% of CGPA 400L. Despite the low performance of the models in predicting the student CGPAs, there are statistical significant except for CGPA 400L, which is statistically not significant.

Table 4: Logistic Regression Model for Final Class of Degree

Statistic	Value
Log(Likelihood)	561.757
R ² (Cox and Snell)	0.128
R ² (Nagelkerke)	0.140
Chi-square	32.920
Pr > Chi ²	< 0.0001
	UTME POST UTME
Chi-square (Wald)	12.31897 16.13229
Pr > Wald	0.0151 0.0028

Table 6 revealed that the coefficient of determinant was 0.13 (Cox and Snell) and 0.14(Nagelkerke). The model have a predicted power of about 14%, which implies that the model explained about 14% of the final class of degree. However, despite of the performance it was statically significant (0.0001) at level of 0.05. In addition the contribution of each predictors were assess whereby both of them have contributed statistical significant to the model. This shows that the UTME and post UTME served as the predictors of final class of degree.

Discussion of Finding

The study has revealed that applicants score higher in PUTME than in UTME and this is attributed to JAMB’s UTME being written before applicants finish secondary. The result of the scores for UTME reveals that the highest mean scores has being increasing over the years while the highest individual score is also in 2015. This shows that the applicants are scoring higher each year.

The prediction of students CGPA from their performance in UTME and PUTME in KASU reveals that UTME and PUTME are good predictors of students’ final class of degree. In this study UTME and PUTME when taken separately, significantly predict students CGPA of 100L, 200L and 300L in KASU as shown in Table 5. In the same way, the studies by Ubokobong (1993), Itsuokor (1994), Ojerinde and Kolo (2007) and Adeyemi (2011) revealed findings consistent with the present one. These findings have revealed that UTME and POST-UTME in their separate works have positive and significant relationship and predictive strength with CGPA and First Year Grade Point (FYGP). The finding of this study is not in agreement with those of Obioma and Salau (2007) and Margaret (2012) who in their separate work found that students’ entry qualification such as UTME and PUTME does not significantly predict students’ CGPA.

Conclusion

The findings of this study have shown that UTME and PUMTE can be described as the predictor of students CGPA in KASU. They further revealed that UTME, which is followed closely by PUTME, predicts academic performances among students in KASU. This might be the reason why the management of KASU stopped the conduct of PUMTE after 2015 and use JAMB’s UTME as the sole examination to gain admission into KASU.

Acknowledgement

This research work and subsequent publications were funded by TETFUND through the Kaduna State University Research Board.

REFERENCES

Achor, E. E., Aligba, O. S. and Omanayi, O. E. (2010). Predictive Power of Two Selection Examination Scores on Senior School Certificate Examination Result of pre -degree Science Students of Benue State University, Markurdi, Nigeria, *Journal of Science and Technology Education Research*, 1 (2): 37-43

Ademayo, E.O. (2008). A Meta-analysis of Empirical Studies on the Validity of UME in Nigeria, Ph.D Thesis, Faculty of Education, Obafemi Awolowo University, Ile-Ife

Afolabi, A.O; Mabayoje, V.A and Oyadeyi, A.S. (2007). Selection Criteria for Entry into the Medical Program of Nigerian Universities: The Efficacy of Combining School Certificates Results with JAMB Scores in Selection of Candidates into the Ogbomosho Medical School, *African Journal of Biomedical Research*, 10: 203-209

Agbomifoh and Dlmowo (1985). Admission into the Social Sciences; A Case Study of the Predictive Value of Joint Admission at the Matriculation Examination of the University of Benin, *Journal of the Nigerian Educational Research Association*, 52:1-10

Ajala, O.P. (2010). Three Years of Post UME Screening Influence on Science Education Students’ Achievement in Delta State University, Abraka, *International Journal of Education Science*, 2 (1):28-40

Akinola, O.S. (2013). Multi-dimensional Post-UTME Data Analysis: A Case Study of Department of Computer Science, University of Ibadan, Nigeria, *Information Systems Development Information and Business Management*, 4(3): 33-42

- Ayuba, P. (2015). Comparative Analysis of Post University Matriculation Examination in Nigerian Universities Using Fuzzy Logic, *British Journal of Mathematics and Computer Science*, 11(6): 1-10
- Bangboye, E. A., Ogunnowo, B. E., Badru, O. B. and E. O. Adewoye (2001). Student Admission Grades and Performance at University of Ibadan Pre-Clinical MBBS Examination, *African Journal Med. And Med. Sciences*, 30:201-211
- DUA (2018). *Kaduna State University 2017 Annual Report*, UYK Printers, Kaduna
- Dogo, B. (1995). Cadets Performance in the Geographical Information System Course in the Nigerian Defence Academy, *Nigerian Defence Academy Journal*, 5
- Ejikeonye, A. (2004). *Scrap JAMB, NECO and Save Nigeria Education*. Lagos Brum.
- Eze, E. C. (2014). University Matriculation Examination as a Predictor of Students Final Grade in the Faculty of Health Sciences and Technology of University of Nigeria, Nsukka, M.Sc. Dissertation, University of Nigeria. Nsukka, Enugu Campus
- Idika, D.O. (2015). Parents Concerns about the Use of Computer Based Testing (CBT) for UTME in Cross River State, Nigeria, *Nigeria Journal of Educational Research and Evaluation*, 14(3)
- Ifedili, C. J. A and Ifedili, J. C. (2010). An Assessment of Post University Matriculation Examination: A Case Study of University of Benin, *Journal of Social Science*, 22(2); 101-106
- Igwue, D.O. and Adikwu, O. (2012). Measurement of Intellectual Functioning of Nigerian Youth: The Predictive Validity of JAMB/UME in Relation to Students' Performance in University, *Educational Research*, 3(8): 639-644
- Ikiroma, B. (2016). Predictive Validity of Academic Entry Requirements into Federal Universities in Nigeria, *Journal of Education Research and Behavioral Sciences*, 5(2):31-40
- Joe, A. I., Kpolovie, P. J., Osonwa, K. E. and Iderima, C. E. (2014). Modes of Admission and Academic Performance in Nigerian Universities, *Merit Research Journal of Education and Review*, 2(9): 203-230
- Kale, O.O. (2004). *An Educational System in Decline; Lecture 3 of Nigeria in Distress; A Trilogy on the Nation's Health Status*, University Lecture, University of Ibadan, 83. Ibadan: O'dua Printing and Publishing Company
- Obioma, G. and Salau, M. (2007). The Predictive Validity of Public Examinations; A Case Study of Nigeria, A Paper Presented at the 33rd Annual Conference of International Association for Educational Assessment (IAEA) held in Baku, Azerbaijan, 16-21 September
- Ogonor, B. O. and Olubor, R.O. (2002). Matriculation Examination as a Predictor of Undergraduate Overall Grading in a Nigerian University, *Journal of the Commonwealth Council of Educational Administration and Management*, 30 (3)
- Okobia, D. O. (2016). Predictive Efficacy of UTME, IST and UTME Plus on Degree Students Cumulative Grade Points Average: A Case Study of College of Education, Agbor, Nigeria, *International Journal of Innovative Research and Development (IJIRD)*, 4(6):53-58
- Oladejo, O. (2016). An Evaluation of University of Ibadan Post UTME Model Web page Retrieved on 5th January, 2016 from <http://www.ui.edu.ng/content/evaluation-ui-post-utme-model>.
- Olaleye, S.B. and H.A Salami (1997). Predictors of Academic Performance in the Pre-Clinical Sciences. Effect of Age, Sex, and Mode of Admission at the University of Maiduguri Medical School, *African Journal Med. And Mode Med. Sciences*, 21:29-34
- Olayemi. I.K and Oyelekan, O.S. (2009). Analysis of Matriculation and Post-Matriculation Examination Scores of Biological Science Students of Federal University of Technology, Minna Nigeria, *Ilorin Journal of Education*, 28:11-18
- Omirin, M.S (2007). Gender Issue in the Performance of Students Admitted Through UME and Pre-degree into the Nigerian Universities, *Educational Research and Review Academic Journal*. 2(3):046-048
- Omodara, M.F (2010) Assessment of the Predictive Validity of UME scores on Academic Performances of Science University Undergraduates: *Multidisciplinary Journal of Research Development*, 14 (1):66-71
- Osakude, J.O. (2011) Effectiveness of University Matriculation Examination and Post-University Matriculation Examination on the Academic Performance of Nigerian Undergraduate Students, *Journal of Education and Practice*, 2(4): 59-65
- Oyebola, D.D.O. (2006). 'The Importance of 'O' Level Grades in Medical School Admission the University of Ado Ekiti Experience', *African Journal of Biomed. Res.*, 9:15-21
- Patrick, A.O. (2010). Three Years of Post UME Screening: Influence on Science Education Students' Achievement in Delta State University, Abraka, *International Journal of Education Science*, 2(1): 29-40
- Saladeen, H.M. and Murtala. A.B. (2005). Relationship between Admission Grades and Postgraduate of Students in the First Professional Examination in a New Medical School, *African Journal of Bio Research*
- Salim, B. (2006). A Case Study of Common and Unified Entrance Examination into Nigerian Universities. A Paper Presented at the 6th NAPEUAP Leadership Forum in Calabar
- Uhunmwuango, S.O. and Ogunbadenyi, O. (2014). The University Matriculation Examination as a Predictor of Performance in Post University Matriculation Examination: a Model of Education Development in the 21st Century. *African Research Review*, 8(32):99-112
- Ukwuije, R.P.I and Asuk, A.W. (2011) in Ukwuije, R.P.I (2012). Educational Assessment: A sine Qua Non for Quality Education, 83rd edition of the Inaugural Lecture Series at University of Port-Harcourt
- Umo, U. and Ezeudu, S.A. (2010). Relationship between University Matriculation Scores and the Screening at the University of Nigeria Nsukka, (Online) www.iaea.info/documents/paper-11621ebe4