

EFFECT OF ENTRY REQUIREMENT, SECONDARY SCHOOL TYPE ON CUMULATIVE GRADE POINT AVERAGE IN TARABA STATE UNIVERSITY, NIGERIA.

ABSTRACT

This paper considered the effect of student's entry requirements, Secondary school type and Cumulative Grade Point Average of the 2014/2015 final year students of the four faculties of the Taraba State University. Primary data was collected through the use of questionnaire from the respondent of the selected programmes from each faculty. Multiple correlation Analysis was carried out on the students' CGPA's at lower levels, UTME score, SSCE results and Secondary school type. It was discovered that only CGPA at the end of 300 level has significant relationship with CGPA at the current level while the stepwise regression analysis shows that only CGPA at 300 level is the best predictors of students' graduation CGPA all other variables are not significant.

Keywords: UTME Score, SSCE Results, Secondary School type and CGPA

1. INTRODUCTION

According to Tosanwumi (2011) In order to qualify for admission into the Nigerian university, a candidate must satisfy some minimum requirements. In the first place, he or she must obtain five relevant credits in the Senior Secondary School Certificate Examination (SSCE) including English and Mathematics. Examination taken by candidates in their last stage of secondary education is called Senior School Certificate Examination (SSCE). All senior secondary schools in the federation present candidates for the SSCE because the results are used for.

- (a) Admission into tertiary Institutions
- (b) Employment Purposes
- (c) Qualification to stand for elective offices.

Another core component of the mandate of the examination bodies as espoused in the enabling law is the conduct of Senior School Certificate Examination for external candidate.

The same SSCE examination is taken by the different Secondary School types whether Public schools or Private schools.

In addition, such a candidate must sit for and obtain a minimum pass mark in the Unified Tertiary Matriculation Examination (UTME) conducted by the Joint Admissions and Matriculation Board (JAMB) as well as pass an additional post University matriculation examination screening test (post-UME) conducted by the selected university.

The Joint Admission and matriculation Board is a Nigerian entrance extermination Board for tertiary institutions. The board conducts entrance examination for prospective undergraduate into Nigerian Universities. The board is also charge with the responsibility to administer similar examinations for applicant to Nigerian Public and private Monotechnics, Polytechnics and colleges of education. All of these candidates must have obtained the West African Certificate now West African Examination Council or its equivalent.

Notwithstanding these stringent requirements for admission, the Nigerian students still perform badly in their semester examination, indulging in a variety of examination malpractice which makes the conduct of examinations a tedious chore. The performance of candidates in these examinations (SSCE and UTME) should reflect in their performance while in tertiary institutions. The school of thought is that the performance at (SSCE or UTME) is related to the student's Cumulative Grade Point Average (CGPA) except if there are some interference.

This study is to determine the relationship between SSCE, UTME score and (CGPA). Candidates who obtained the 5 minimum relevant credits in their SSCE are required to pass their UTME before proceeding to the tertiary institutions.

NUC (2007) defines grading as the process of applying standardized measurement of varying levels of achievement in a course. The Grade can be obtained through the use of Grade Point Average (GPA) method. Performance in any semester is reported in Grade Point Average. This is the average of weighted grade points earned in the courses taken during the semester. The Grade Point Average is obtained by multiplying the Grade Point average in each course by the number of Credit Units assigned to that course, and then summing these up and dividing by the total number of Credit Units taken for the semester.

The CGPA an indication of the student's overall performance at any point in the training programme. To compute the Cumulative Grade Point Average, the total of Grade Points multiplied by the respective Credit Units for all the semesters are added and then divided by the total number of Credit Units for all courses registered by the student.

1.1 REVIEW OF RELATED LITERATURES

Lawal and Adejuwon (2014) determined the admission predictor that reduce the level of poor performance of undergraduates and reduce the level of attrition consequent upon poor performance and its attendant level of dropouts and prolonged stay in the university. They examined the academic admission scores of; SSCE, UTME, PUTME and as predictors for the performance of the pioneer graduating students. They opined that UTME is a bad predictor, yet a government compulsory requirement for admission, thus they recommended that universities should continue to combine the UTME and PUTME but assign less weight to the UTME.

Sojobi, Mabosanyinje, Ogunsanya and Sulaimon (2014) examined the relative effectiveness of the Unified Tertiary Matriculation Examination (UTME) and Post Unified Tertiary Matriculation Examination (Post-UTME) on the first year (NDI) academic performance of students admitted to Moshood Abiola Polytechnic in 2012/2013 session. They also discovered that Post-UTME was more effective than the UTME, and that there was a low and inverse relationship between students' score in Post-UTME and UTME. They recommended that, Polytechnics managements should give high priority to students' Post-UTME performance than their UTME performance.

Ibrahim and Hassan (2013) studied the relationship between West Africa Senior School Certificate Examination (WASSCE) entry grade in Mathematics and academic achievement of Nigeria certificate of education (NCE) Mathematics students in Niger state college of education, Minna. Ex-post facto research design was adopted for the study. When the results of male and female students were independently correlated, the male students maintained a high positive correlation, while the female students showed low positive correlation. It was recommended among others that State Ministry of Education should intensify more effort in conducting regular inspection of schools to ensure that effective teaching of mathematics is carried out in order to achieve the objectives of National Policy on Education which include the preparation of students for higher education (FRN, 2004).

James and Borisade (2013) investigates the relationship between cognitive entry characteristics (CEC), semester examination scores and student's achievement in mathematics and to find out the predictive strength of CEC and semester examination scores on college students' achievement in mathematics. The study employed ex-post facto design was applied on 415 full-time students admitted into a three-year National Certificate in Education (NCE) programmes in 2007/2008 and 2008/2009 academic sessions were selected using purposive sampling technique.

An inventory, "entry characteristics and academic achievement" was used in collecting all the relevant data for the study. The data collected were subjected to statistical analysis using correlation and multiple regression analysis. The results of the study revealed that there is a positive and significant correlation between the criterion variable (Cumulative Grade Point Average CGPA).

Buameh and Philip (2013) carried out a research work on the student performance in different courses. The study employs systems theory to analyze the relationship between the quality of students admitted and their performance in the early part of the undergraduate programme using Pearson's correlation. And the study concludes that there is a relationship between Core Mathematics and Accounting at pre-university level and performance of undergraduate Accounting Students' performance. No correlation was however found between pre-university English and their university level performance. The study recommends that, due consideration be given to the existing admission policy criteria regarding emphasis on performance in Core English, particularly for accounting students seeking to pursue accounting programmes, as it may be more harmful than good.

Emmanuel and Osho (2012) investigate the mode of entry as a predictor of success in Bachelor of Science in Education Mathematics Degree Examinations in Adeyemi College of Education (A.C.E), Ondo State, Nigeria. The study sample population comprises the 2006/2007 – 2009/2010 Mathematics Department Students of the College. The trend of their performance in the session Examinations with respect to their mode of entry (MOE) was considered for the study with special focus on final year student who scored Cumulative Grade Point Average of 3.50 and above in their final examinations. The data collected was analyzed using frequency counts, percentage, measure of central tendency and graphical illustrations. The findings revealed that the Direct Entry (DE) mode of entry is the best predictor of success in the College when compared with the University Matriculation Examination (UME) mode students' performance. Based on the findings, the paper recommends that more attention and appreciable quota should be given to the DE in the admission process into the degree awarding Colleges and as well as the Universities in a bid to achieve the lofty goals of the National Policy on Education in providing the much needed qualitative education in Nigerian Universities because the NCE, HSC Programmes, e.t.c are veritable tools in this regards.

Agbodah and Godfred (2012) conducted a research to determine if SSCE scores, session and sex of students imparts negatively or positively on each student FCGPA score at the tertiary level. Data were compiled from the student records of various departments. The information sought were on gender, the session (morning or evening), the cumulative grade points average and the Senior Secondary School Certificate Examination (SSCE) scores of the 2006 to 2009-year group of students. The multiple linear regression with interaction was used to analysis the data. It was found that students who attend the morning session on the average obtain higher (CGPA) than their evening counterparts. It was also identified that there is no relation between a student's sex and his or her cumulative grade points average (CGPA) at 5% significance level. Also a student who enters Koforidua Polytechnic with the "best SSCE" scores obtains the highest cumulative grade point average (CGPA).

Abe (2012) investigates sex differential in predicting academic achievement from cognitive entry characteristic and semester grades among the Mathematics students of College of Education, Ikere, Ekiti State, Nigeria. Stratified random Sampling Technique was adopted to select a sample of 367 students (141 Males and 226 females) from the nine Mathematics Combinations. While t-test statistic and Multiple regression (backward solution) were used in the data analysis the result showed that at $P < 0.05$, Significant difference existed between male and female academic achievement (CGPA) while, there was no significant difference between male and female academic performance in algebra and statistics.

Aforementioned work did not include the SSCE, secondary school type, UTME Score and CGPA together in any of the analysis. Hence this work is an attempt to use all the variables and see how correlated they are to CGPA.

2. MATERIAL AND METHODS

The data for this work was collected using questionnaire from all the four faculties, namely Faculty of Agriculture (FAG), Faculty of Arts and Social sciences (FASS), Faculty of Education (FED) and Faculty of Sciences (FSC) of the Taraba State University (TSU). Three programmes were selected from each faculty using a Simple Random Sampling and Method of proportional allocation of sample size was employed in allocating the sample sizes to each of the faculty using

$$n_h = n \frac{N_h}{N}$$

(See Fabian 2012)

Where,

n_h = Sample size allocated to each faculty.

n = number of samples required.

N_h = Number of Students per faculty

N = Total number of final year students from the 4 faculties.

Data collected includes, CGPA at the end of 300 levels and 400 levels for those in Faculty of Agriculture, senior secondary school type of the respondents, this has two mutually exclusive dummy variables; public school coded as 1, while private school is coded as 0, other variables includes scores in O'level, where five relevant credits passes for each respondent were rated in scale as;

A1= 9

A2=8

B3=7

B4=6

D5=5

C6=4

The scales were added for each respondent, and serve as O'level score.

The population of this project work consists of all the 1,293 final year students of 2014/2015 academic session of TSU. Where, FAG = 45, FASS = 507, FED = 523 and FSC = 223. The sample size chosen is 150.

The selected programmes are represented in Table 1 while Table 2 shows the sample allocated to each faculty and programme.

Table 1. Code Used for Random sampling

| FAG | | FASS | | FED | | FSC | |
|------|--|------|-------------------|------|-------------------------------|------|------------------|
| CODE | Programme | CODE | Programme | CODE | Programme | Code | Programme |
| 01 | B.Agric Agronomy | 02 | B.sc economics | 07 | B.Sc Ed. Geography | 05 | B.sc Physics |
| 02 | B.Agric. Agric. Econs. & Ext. | 05 | B.sc Geography | 04 | B.A Ed. English | 06 | B.sc Statistics |
| 03 | B.Agric. Animal Science | 07 | B.A History | 10 | B.A Ed. Islamic Studies | 04 | B.sc Mathematics |

Table 2: Sample selected per Faculty (Stratum)

| Stratum | N_h | W_h | $n_h = nW_h$ | $n_h = n/L$ |
|---------|-------|-------|--------------|-------------|
| FASS | 507 | 0.392 | 59 | 19 |
| FED | 523 | 0.404 | 60 | 20 |
| FSC | 223 | 0.172 | 26 | 9 |
| FAG | 45 | 0.034 | 5 | 2 |
| TOTAL | 1,293 | | | 50 |

Regression and Correlation Analysis was employed to investigate the relationship between the SSCE, UTME score, School type and the CGPA.

Data collected was analyzed using the Regression and Correlation Analysis to answer the research questions.

3. RESULTS AND DISCUSSION

The correlation results for the four faculties as shown in Table 3. shows that only CGPA at 100 Level, CGPA at 200 Level and UTME score has strong/positive perfect relationship with the CGPA at 300 Level while the two other factors (Secondary School type and O' level) has weak/negative perfect relationship with the CGPA at 300 Level.

The model summary for the four faculties as shown in Table 5 shows that about 79.9 % of the variation in CGPA at 400level is explained only by CGPA at 300 level.

The ANOVA Table for the four faculties as shown in Table 4 shows that best model to use in predicting the graduation CGPA is $Y = \beta_0 + \beta_1 CGPA_{200L}$

The Coefficients and Excluded variables for the four Faculties as shown in Tables 7 shows that when a stepwise regression analysis was carried out on the six variables namely CGPA at 300L, CGPA at 200L, CGPA at 100L, Secondary School type, UTME Score and O' Level. During the analysis, it was discovered that only CGPA at 200L is significant in the model. All other variables are not significant in the model. It can therefore be concluded that students' performance at the 200/300 level is the best predictor of their final CGPA (Graduating CGPA).

The Model for predicting the Graduation CGPA is given as;
 $CGPA_{Final} = 0.399 + 0.876 CGPA_{200L/300L}$

Table 3. Correlation Analysis for the Four faculties

| | | | CGPA 300L | AT CGPA 200L | AT CGPA AT 100L | SEC. SCH. TYPE | UTME SCORE | O' LEVEL |
|----------------------|------------------------|------------------------|--------------|-----------------|--------------------|-------------------|---------------|----------|
| CGPA 300L | AT | Pearson Correlation | 1 | .894** | .838** | .012 | .136 | .123 |
| | | Sig. (2- tailed) | | .000 | .000 | .892 | .125 | .168 |
| | | N | 128 | 128 | 128 | 128 | 128 | 127 |
| CGPA 200L | AT | Pearson Correlation | .894** | 1 | .923** | -.038 | .185* | .138 |
| | | Sig. (2- tailed) | .000 | | .000 | .674 | .037 | .122 |
| | | N | 128 | 128 | 128 | 128 | 128 | 127 |
| CGPA 100L | AT | Pearson Correlation | .838** | .923** | 1 | -.069 | .130 | .102 |
| | | Sig. (2- tailed) | .000 | .000 | | .436 | .143 | .254 |
| | | N | 128 | 128 | 128 | 128 | 128 | 127 |
| SEC. SCH. TYPE | Pearson Correlation | | .012 | -.038 | -.069 | 1 | .047 | -.011 |
| | | Sig. (2- tailed) | .892 | .674 | .436 | | .597 | .901 |
| | | N | 128 | 128 | 128 | 128 | 128 | 127 |
| UTME SCORE | Pearson Correlation | | .136 | .185* | .130 | .047 | 1 | .103 |
| | | Sig. (2- tailed) | .125 | .037 | .143 | .597 | | .250 |
| | | N | 128 | 128 | 128 | 128 | 128 | 127 |
| O' LEVEL | Pearson Correlation | | .123 | .138 | .102 | -.011 | .103 | 1 |
| | | Sig. (2- tailed) | .168 | .122 | .254 | .901 | .250 | |
| | | N | 127 | 127 | 127 | 127 | 127 | 127 |

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

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

Table 4. ANOVA Table for the four faculties

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|---------|-------------------|
| 1 | Regression | 67.555 | 1 | 67.555 | 499.513 | .000 ^a |
| | Residual | 17.041 | 126 | .135 | | |
| | Total | 84.596 | 127 | | | |

a. Predictors: (Constant), CGPA AT 200L

1. Dependent Variable: CGPA AT 300L

Table 5. Model Summary for the four faculties

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .894 ^a | .799 | .797 | .36775 |

a. Predictors: (Constant), CGPA AT 200L

Table 6. Coefficients Values for the four faculties

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|--------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| (Constant) | .399 | .119 | | 3.341 | .001 |
| CGPA AT 200L | .876 | .039 | .894 | 22.350 | .000 |

Dependent Variable: CGPA AT 300L

Table 7. Excluded Variables for the four faculties

| Model | | Beta In | T | Sig. | Partial Correlation | Collinearity Statistics Tolerance |
|-------|----------------|--------------------|-------|------|---------------------|--------------------------------------|
| 1 | CGPA AT 100L | .092 ^a | .882 | .379 | .079 | .148 |
| | SEC. SCH. TYPE | .046 ^a | 1.143 | .255 | .102 | .999 |
| | UTME SCORE | -.030 ^a | -.729 | .467 | -.065 | .966 |

| O' LEVEL | .003 ^a | .067 | .947 | .006 | .985 |
|--|-------------------|------|------|------|------|
| 1. Predictors in the Model: (Constant), CGPA AT 200L | | | | | |
| 2. Dependent Variable: CGPA AT 300L | | | | | |

4.CONCLUSION

The data presented here shows that the CGPA at 100 level and CGPA at 200 Level correlates positively/strongly with performance in the third year of study of students in faculty of Arts and Social Sciences, Faculty of Education and Faculty of Sciences and the data also shows that CGPA at 200 Level and 300 Level correlated positively/strongly with performance in the fourth year of study of study in faculty of Agriculture. On the other hand, Secondary School type, UTME score and O' level (SSCE) results correlated negatively/weakly with the CGPA at 100 level, CGPA at 200 Level and CGPA at 300 Level for faculty of Arts and Social Sciences, Faculty of Education and Faculty of Sciences and CGPA at 200 level, CGPA at 300 Level and CGPA at 400 Level for faculty Agriculture. Based on these findings we can therefore, conclude that there is Significant relationship between CGPA's at lower levels and the current level and there is no significant relationship with Secondary school type, UTME score and SSCE results, that CGPA at 200 level is the best predictor of predicting the graduation CGPA of the final year students of faculty of Arts and Social Sciences, Faculty of Education and faculty of Sciences and CGPA at 300 level is the best predictor of predicting the graduation CGPA of the final year students of faculty Agriculture.

5. RECOMMENDATION

Based on the finding of this study the following recommendations were made:

- i. As far as undergraduate programme is concerned in Nigerian universities, there should be emphasis on the teaching and studying at early session's courses as early sessions CGPA has strong relationship with the current CGPA and could also be used to predict subsequent academic performance of Students.
- ii. Much priority shouldn't be given to those with high UTME score and High Number of credits as UTME Score and Number of credits have weak/poor relationship with the students' academic performance while in university.
- iii. Since UTME score is poor predictor of student academic performance Taraba State University should be conducting POST-UTME examination before giving admissions to students.
- iv. That performance at the O'levels has no positive correlation with graduating CGPA.

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