

A Statistical Analysis Of The Performance Distance Learning Students And The Full-Time Students At The University Of Lagos

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ABSTRACT

The study compares the performance of distance learning students with full-time students in a traditional face-to-face learning environment. This study is one aspect of a larger research project designed to gain insight into factors that may influence the performance of distance learning students. The data used in the study represent the graduating GPA (Grade Point Average) and CGPA (Cumulative Grade Point Average). The result showed that students of Distance Learning Institute (DLI) performed better in business administration than the mainstream students, while the mainstream accounting students perform better than the DLI accounting students. Results indicated that there was a statistically significant difference in final grades of these groups of students.

Keywords: Face to face, Cumulative Grade Point Average, Grade Point Average, flexibility, Distance education

INTRODUCTION

A cursory look at the Distance Learning programme in Nigeria today is very important because of its contribution to the knowledge, social, economic and technological development. The period of psychological demoralization is gone when people assumed that Distance Education was meant for people who cannot pass the entrance examination to the University organized by Joint Matriculation Admission Board (JAMB) in Nigeria. The increase demand for tertiary education in Nigeria experienced in the early 80's showed that there is a greater need among working adults to continue their education. However, most adult workers in the country are not able to continue their studies using the conventional means due to their work and family commitments. Distance education provides the flexibility for them to continue their studies. Many in higher education of learning see the distance learning programme as a cost-effective instructional methodology because the students do not have to be a resident with their teacher or instructor (Joan Kleinman, 2002). Today, distance learning programmes are available in all nook and crannies of the world as a means of providing mass education to all. Questions had been raised by the populace about the effectiveness of a distance learning programme compared to the traditional method of the face-to-face method of teaching.

The Distance learning Institute of the University of Lagos was established in 1962 with a student population of 131 in 1962 to more than 8,000 students today. The courses offered were science education and management courses. One might speculate that since the distance learners are more mature than traditional students, they are better able to monitor their own progress. The goal of this study was to explore whether differences in academic performance exist between students studying via a face-to-face learning environment and those studying via distance education. The remainder of this article is sectionalized as follows: we described the data and the methodology used in the study in section 2; results and interpretation is presented in section 3. The article is concluded in section 4.

2. DATA AND METHODS

The data used in this paper are the graduating results of final year students of the two groups of students - the Distance Learning Students (DLI) and the mainstream students. The Cumulative Grade Point Average (CGPA) of the final year students was used for the analysis. The two sets of students are taught by the same lecturer of the university using the same course contents. The data set comprised of the CGPA of 565 graduate students at the distance institute and 235 of the regular or mainstream. Descriptive statistics are used for this study. The descriptive procedures are useful for obtaining summary comparisons of variables that can be easily understood. In addition to the measures of central tendency, like the mean, median and mode, we also utilize statistics, such as skewness and kurtosis. A t-test was done to compare the means CGPA of the two groups of students. Further, a separate t-test was done to compare the performance of Accounting and Business Administration students from the two groups (i.e. DLI and Regular or mainstream).

3. ANALYSIS AND INTERPRETATION

Tables 1-5 show the descriptive statistics and results of the t-test significant difference in the mean CGPA.

Table 1: Statistical measures of Graduating Cumulative Grade Point Average (CGPA) and Final Grade Point Average (GPA) of Distance Learning Students

Statistic	Business Administration	Accounting	Combined
Sample Size	360	205	565
Range	3.4	3.26	3.4
Mean	2.55	2.67	2.59
Std. Deviation	0.72	0.75	0.73
Std. Error	0.04	0.05	0.03
Minimum	1.02	1.02	1.02
Maximum	4.42	4.28	4.42
5% Percentile	1.4	1.38	1.39
10% Percentile	1.62	1.64	1.63
25% (1 st quartile)	2.03	2.06	2.06
50% (median)	2.55	2.72	2.59
75% (3 rd quartile)	3.09	3.22	3.11
90% Percentile	3.55	3.65	3.57
95% Percentile	3.69	3.89	3.83

Table 2: Statistical Measures of Graduating Cumulative Grade Point Average (CGPA) and Final Grade Point Average of Full-time Students of University of Lagos

Statistic	CGPA		GPA	
	Bus. Admin	Accounting	Bus. Admin	Accounting
Sample Size	128	107	128	107
Range	3.86	3.96	3.28	3.39
Mean	2.9811	2.9997	2.9756	3.0116
Std. Deviation	0.82836	1.1655	0.84743	1.0666
Coef. of Variation	0.27787	0.38853	0.28479	0.35416
Std. Error	0.07322	0.11267	0.0749	0.10311
Skewness	-0.41343	-0.56275	0.12799	0.03544
Excess Kurtosis	0.40814	-1.021	-0.98693	-1.5443
Minimum	1	0.67	1.33	1.46
Maximum	4.86	4.63	4.61	4.85
5% Percentile	1	1	1.7045	1.534
10% Percentile	2	1	1.887	1.628
25% (1 st quartile)	2.525	2	2.2825	1.95
50% (median)	3	3.43	2.905	2.96
75% (3 rd quartile)	3.57	4	3.8	4.03
90% Percentile	4	4.29	4.17	4.396
95% Percentile	4.312	4.5	4.342	4.518

Table 3: Overall Performance Based on Programme of Students

		t - value	Df	P-value
Overall performance	DLI Versus Mainstream	6.433	797	0.000
Business Administration students	DLI Versus Mainstream	5.46242	486	0.000
Accounting students	DLI Versus Mainstream	-3.3784	311	0.008

Table 4: Performance Based on Class of Degree for Accounting Students

		t – value	df	P-value
Second class upper	DLI Versus Mainstream	2.85092	64	0.006
Second class lower	DLI Versus Mainstream	-1.6386	125	0.104
Third class	DLI Versus Mainstream	-1.8538	95	0.667
Pass	DLI Versus Mainstream	-1.7715	14	0.098

Table 5: Performance Based on Class of Degree for Business Administration Students

		t - value	df	P-value
Second class upper	DLI Versus Mainstream	3.38463	70	0.001
Second class lower	DLI Versus Mainstream	-0.1841	213	0.854
Third class	DLI Versus Mainstream	0.07732	164	0.938
Pass	DLI Versus Mainstream	1.30339	28	0.203

There was a statistically significant difference between the distance education and face-to-face groups regarding overall academic performance, as measured by grade earned ($p = .000$). The students who enrolled in the full-time programme at the University of Lagos earned, overall, a 3.01/5.00 and the students who took the distance education earned a 2.59/5.00 overall. Tables 1 and 2 below depict the descriptive statistics analysis of both programmes. Tables 3,4 and 5 show the relationship and academic performance between Distance Learning students and the full-time students when sorting the data by class standing.

There is a significant difference in the mean CGPA of DLI business administration and regular or mainstream business administration students at $p\text{-value} = 0.00$. In the case of Accounting, the result was different. It shows that the regular or mainstream accounting students performed better than the DLI students.

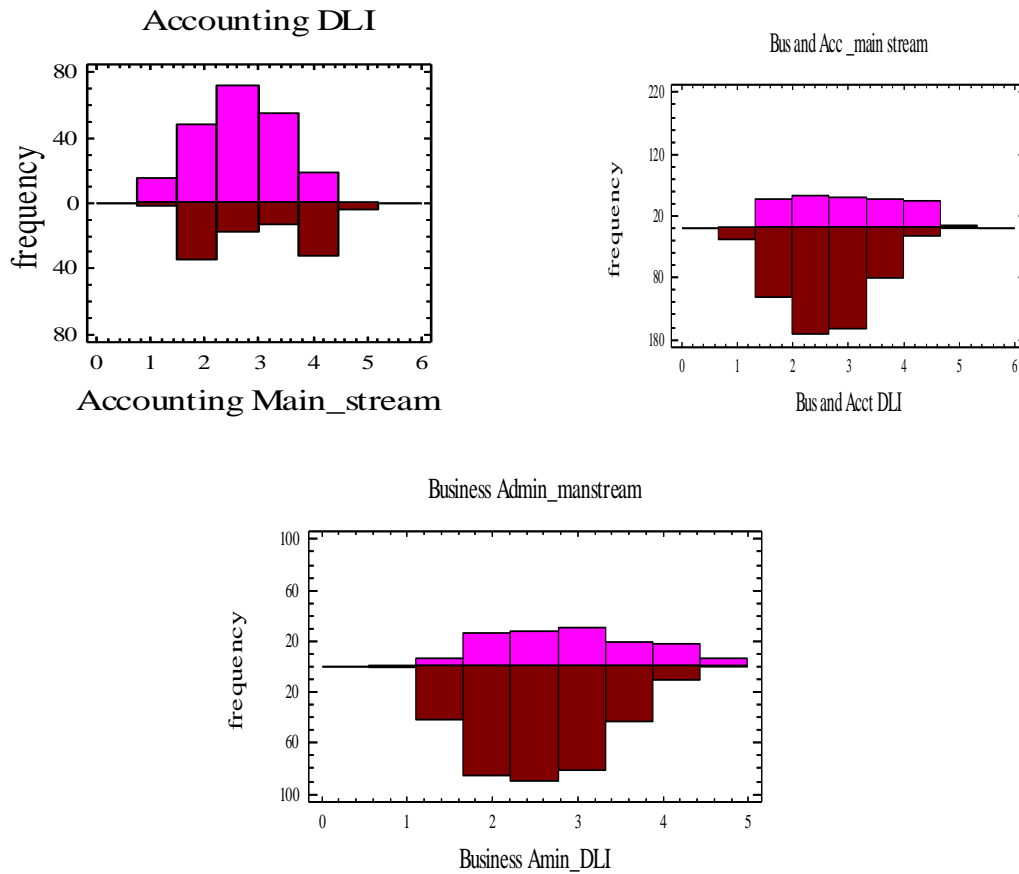


Figure 1: Histograms comparing the performance of final year students

4 CONCLUSION

This paper compares the Distance Learning Institute and the full-time students in both Accounting and Business Administration. An analysis of students’ performance was done based on their final grade point average. The results showed that students at the Distance Learning Institute performed better in BusinessAdministration than the mainstream students, while the mainstream Accounting students did better than the DLI students. Results showed that students at the Distance Learning Institute (DLI) performed better in Business Administration than the mainstream students, while the mainstream Accounting students did better than the DLI students.

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