INTERNATIONAL JOURNAL OF WOMEN IN TECHNICAL EDUCATION AND EMPLOYMENT (IJOWITED)

International Journal of Women in Technical Education and Employment
ISSN: 2811-1567. Volume 4 – Issue 1. July 2023
https://fpiwitedjournal.federalpolyilaro.edu.ng

Analytical Approach to Justify Jamb Admission Benchmark into Higher Institutions in Nigeria: A Case Study of Federal Polytechnic, Ilaro

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ARTICLE HISTORY

Received: October 19, 2022
Revised: November 5, 2022
Accepted: May 16, 2023

Abstract

This paper looked into the admission process of federal polytechnic ilaro. Admission process in federal polytechnic ilaro into National Diploma program can be through joint admission and matriculation board or through the part-time program that is organized by the school. Most of the students that obtained form for part-time program of the institution are those who could not meet up with the JAMB benchmark for admission process. The interest of the author is to find out if there is a difference in the performance of students of the two groups. JASP software for statistical analysis was used to analyze the scores of students from three departments in MTH 101 and GNS 101 and it was discovered that the part-time students have a mean score of 23.244 while full-time students have a mean score of 28.312. Descriptive analysis alone is considered not enough to really provide answer to the problem of the study because the two groups are not having the same size. The author decided to use inferential analysis to determine whether there is a statistically significant difference between the means of the two groups. A p-value of less than 0.001 was obtained. The p-value shows that there is a statistically significant difference in the mean scores based on program. Hence, the alternative hypothesis that specifies that group FULL-TIME mean is greater than group *PART-TIME mean is adopted.*

Keyword: Admission-Process, Part-time, Full-time, Diploma-Program.

Citation
Buoye P. A. & Ojuawo O. O. (2023). Analytical Approach to Justify Jamb Admission Benchmark into Higher Institutions in Nigeria: A Case Study of Federal Polytechnic, Ilaro. *International Journal of Women in Technical Education and Employment*, 4(1), 78 – 84.

Introduction

Every year, thousands of students write Joint Admission and Matriculation Board (JAMB) Examination to enable them to proceed further in their education. This Examination is written after a student might have written and passed ordinary level (O level) examination. Some students still write the JAMB Examination while they are awaiting their O level results.

Adedigba (2017) quoted the then JAMB Registrar, Professor Oloyede, that the lack of adequate space in Nigeria's tertiary institutions was the reason behind the conduct of the Unified Tertiary Matriculation Examination. Joint Admission and Matriculation Board (JAMB) involvement in the admission process should be reviewed and the quota system which compel the universities to admit students on quota basis should be discarded (Arikewuyo, 2012).

There is a benchmark that the board gave which determines the possibility of students moving forward on the ladder of academic. This benchmark is what is generally called cut-off mark in Nigeria. Entrance into Nigeria University has a benchmark (called cut-off mark) that is higher as compared to the benchmark for

entrance into polytechnic schools, Mono technic and colleges of educations. Any student who is able to meet up with the benchmark will have the opportunity to process admission to this higher citadel of learning. Students that scored below the benchmark will have to wait for the next examination time which is a duration of 12 months. Osas (2019) described getting admission into tertiary institution in Nigeria as troublesome as getting a visa. Lawal (2017) said it was easier for a camel to pass through the eye of a needle than for secondary school leavers to gain admission into Nigeria's higher institutions. He buttressed the statement with the number of students who gained admission in 2017 as 30 percent of the 1.7 million prospective candidates. In order not to make such students who could not meet the Jamb benchmark became idle, higher institutions (university and polytechnic) run programs that will engage the students. Universities run remedial or pre-degree programs while polytechnics run part-time programs.

There is a huge appetite for higher education in Nigeria according to Leonard (2017), but hundreds of thousands of the Nigerian youths are facing obstacles such as existing infrastructure, policies and political realities.

Admission guideline, as recognized by law, according (Leonard, 2017) in which the admission of candidates into tertiary institutions will be based are the three pillars which are merit, catchment and educationally less developed states. This is in favour of some students and not in favour of many students. Gbesoevi (2021) said that admission policies do not necessarily predict quality teaching both in public and private universities in Lagos state.

At federal polytechnic ilaro, weekend part- time and full part-time programs are available. The full part-time program allows students who could not meet up with Jamb benchmark and believed they can still do well in polytechnic if given the opportunity, to start National Diploma program. These students, who could not meet the Jamb cut-off mark, that are admitted into National Diploma program of the polytechnic will have to compete with the students admitted through Jamb because they will all be graded on the same scale.

Students who were admitted through Jamb because they were able to meet up with the Jamb benchmark and students who were admitted into the polytechnic through the part-time program run by the school because they could not meet up with the JAMB benchmark, who among the two groups perform better? This paper tried to investigate if the regular students admitted by JAMB, have a better performance than the part-time students who could not meet the JAMB benchmark. Does the performance of the two groups justify the JAMB admission system?

Buoye (2021) compared the general performance of students before the introduction of computer-based examination (CBE) and their performance during the computer-based examination and concluded that the students have better performance during the pre-CBE time and proved statistically that the performance was not related to examination malpractice.

Methodology

The study here made use of quantitative and inferential descriptive analysis. The results of students in three departments of the federal polytechnic Ilaro were obtained and analyzed. The three department were selected at random from the federal polytechnic, Ilaro. The three departments have students running full time program and part-time program. The groups (full time and part time) offered the same courses all through and were examined using the same method. ND1 classes were chosen because the author assumed, they all have the same academic background. General studies (GNS 101) and MTH 101 were the two courses examined for the analysis. These two causes were used because the students were graded by computer. These two courses were used so as to limit biases or any other human error during the grading of the students since the courses were computer-based exams. The three departments considered are Business administration

from school of management, Science Laboratory Technology from the school of pure and applied sciences and Mechanical Engineering from the school of engineering.

The grade obtained in General Studies (GNS 101) by both full time and part time students in the department of Business Administration 1 (BAM 1) and the grade obtained in Mathematics (MTH 101) by full time and part time students of science laboratory technology (SLT 1) and mechanical engineering (MEC 1), were collected and analyzed.

Results and Discussions

Table 1: showing the program and score (18 of 932)

	Peogramme	Gender	Score
101	FULL-TIME	M	38
102	FULL-TIME	F	31
102	FULL-TIME	M	27
104	FULL-TIME	M	33
105	FULL-TIME	M	43
106	FULL-TIME	F	35
107	FULL-TIME	M	23
108	FULL-TIME	M	26
109	FULL-TIME	F	27
110	PART-TIME	F	26
111	PART-TIME	M	16
112	PART-TIME	F	18
113	PART-TIME	M	22
114	PART-TIME	M	36
115	PART-TIME	M	23
116	PART-TIME	M	26
117	PART-TIME	M	20
118	PART-TIME	F	29
119	PART-TIME	M	27

The total number of students examined were 932 from Table 1 above (showing part). From table 2 below, 168 of them were female running full time program, 303 of them were female running part-time program. Also, the total number of male students running full time program were 162 while the total number of the male running part-time program were 299. This gave us a total number of 471 female students running both full time and part time and 461 total number of male students running both full time and part time program. 932 results were presented, and 932 results were analyzed meaning that there was no missing results.

Figure 1 below is the pie chat that illustrated the information above diagrammatically. The figure represented the information in percentages. Part-time students, male and female have the largest percentages. Female part-time students have 33% while the male part-time has 32%. Full-time students are 35% both male and female. This is just 2% above the percentage of the female part-time students. This

information told us that part-time and full-time groups do not have the same size.

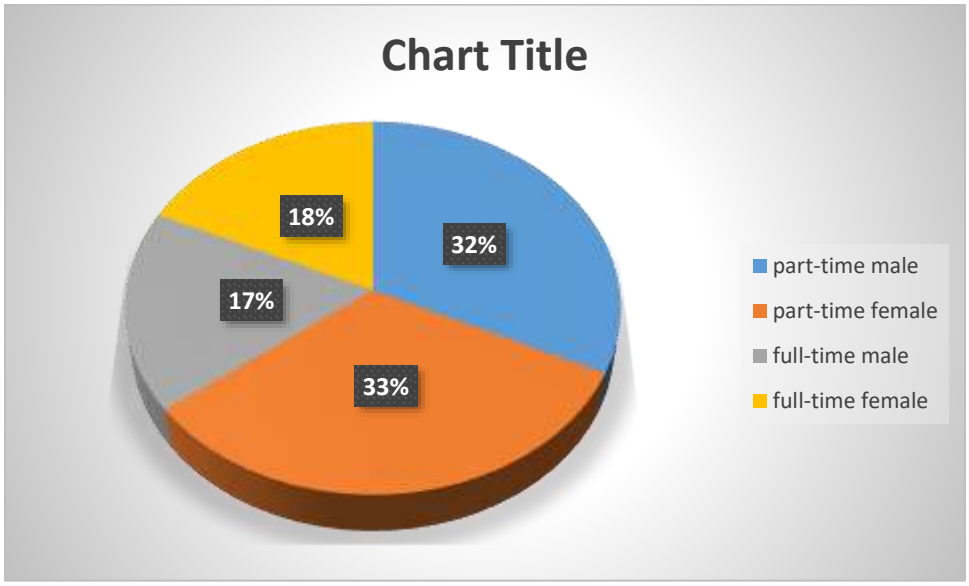

Figure 1: Pie chat of the data.

Table 2: The Frequencies for program

GENDER	PROGRAM	Frequency	Percent	Valid Percent	Cumulative Percent
F	FULL-TIME	168	35.669	35.669	35.669
	PART-TIME	303	64.331	64.331	100.000
	Missing	0	0.000		
	Total	471	100.000		
M	FULL-TIME	162	35.141	35.141	35.141
	PART-TIME	299	64.859	64.859	100.000
	Missing	0	0.000		
	Total	461	100.000		

Table 3 shows the statistical description of the data. 330 students were full time student with mean score of 28.312, median score of 27.50, mode score of 27.0, standard deviation of 6.702, minimum score of 12 and maximum score of 50 (out of total score of 70). The mean score of 602 part-time students is 23.244, median 23, mode 21, standard deviation of 5.415, minimum score is 10 and maximum score is 46.

Table 3: The Descriptive Statistics

	SCORE	
	FULL-TIME	**PART-TIME**
Valid	330	602
Missing	0	0
Mean	28.312	23.244
Median	27.500	23.000
Mode	27.000	21.000
Std. Deviation	6.702	5.415
Minimum	12.000	10.000
Maximum	50.000	46.000

What is of high importance to this research is the mean score of both groups, standard deviation and the total number of students in each group as presented in the table 4 below. From the table 4, the average mean score of full-time students is higher than the mean score of the part-time students. Likewise, the standard deviation of full-time students is higher than that of the part-time students. Does this imply that students running full time program are better academically than their counterpart running part-time program?

Table 4: The Descriptive Score

PROGRAMME	**Mean**	**SD**	**N**
FULL-TIME	28.312	6.702	330
PART-TIME	23.244	5.415	602

Descriptive analysis alone is considered not enough to really provide answer to the problem of the study as mentioned above. The author decided to use inferential analysis to determine whether there is a statistically significant difference between the means of the two groups. A p-value lower than 0.05 set value

makes the difference statistically significant while the p -value higher than 0.05 makes the difference not statistically significant and hence, pointing to the acceptance of the null hypothesis which says the true difference in mean is zero. By running a student's t-test on the data, table 4 below was obtained.

Table 5: Independent Samples T-Test

	t	df	p	
SCORE	12.536	930	< .001	[a]

From the table 5, the t-test value is 12.536 and the degree of freedom (df), which is the sum of the number of the two groups minus 2. That is, (330 + 602) -2 =932-2 = 930 and the p-value is less than 0.001. The p-value less than 0.001 shows that there is a statistically significant difference in the mean scores based on program. This shows that program is a significant variable to measure the achievement or the performance of students.

To verify if the data is normally distributed, Shapiro-Wilk test was carried out and the result is presented on table 6.

Table 6: Test of Normality (Shapiro-Wilk)

		W	p
SCORE	FULL-TIME	0.979	< .001
	PART-TIME	0.988	< .001

Performing an assumption check **(Shapiro-Wilk)** on the data shows that there is deviation from normality (table 6). This made the author to carry out Welch t-test (table 7 below). The result shown that p-value is less than 0.001 and the alternative hypothesis that specifies that group *FULL-TIME* mean is greater than group *PART-TIME* mean is adopted.

Table 7: Welch's t-test

Independent Samples T-Test

	t	df	p	Mean Difference	SE Difference	Cohen's d
SCORE	11.789	566.878	< .001	5.068	0.430	0.832

Conclusion

The study shows that students admitted into higher institution especially at the Federal polytechnic Ilaro, by Joint Admission and Matriculation Board (JAMB) perform better academically than students admitted through part time program running by the school. The average mean score of students admitted through JAMB in the chosen courses is 28.312, this is higher very significantly to the mean score of the students admitted through part time program which is 23.244. Due to large difference in sizes of the two groups, t-test was carried out to compare the two means so as to ascertain our hypothesis. The t-test indicated a p-value that is less than 0.001 which shows that there is a statistically significant difference between the means of the two groups, hence, it suggested that we should reject the null hypothesis. This paper concluded that, the performance of students admitted through JAMB is better than the performance of part time program students.

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