

## Undergraduate Arabic and Islamic Studies Students' Perceptions of Status of Educational Statistics in Awarding B.Ed. Degree in Education in Nigerian Universities

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### Abstract

*This study examined undergraduate Arabic and Islamic Studies students' perceptions of status of Educational Statistics in awarding B.Ed Degree in Education in Nigerian universities. Descriptive survey was used the research design adopted in the study. The population of the study was all Arabic and Islamic Studies students in all universities in Kwara, Nigeria. Simple random sampling technique was used in the study to select the respondents. The instrument used in the study was a researcher self-developed questionnaire titled "perceptions of undergraduate students of Arabic and Islamic Studies in the Status of Educational Statistics in awarding B.Ed Degree in Arabic and Islamic Studies" (PUSAISSESDAIS). Validity and reliability of the instrument were carried out and the reliability coefficient of 0.84 was recorded. Percentage was used to describe demographic representation of the respondents while mean and standard deviation were used to answer all research questions raised in the study. Independent sample t-test was the inferential statistics used in the study to test all hypotheses. The study revealed that undergraduate students of Arabic and Islamic Studies encounter some challenges in some aspects of Educational Statistics. The study also showed that there was significant difference between male and female undergraduate Arabic and Islamic Studies students' perceptions of the status of Educational Statistics in awarding B.Ed Degree in Arabic and Islamic Studies. However, the study showed that there was no significant difference between public and private undergraduate Arabic and Islamic Studies students' perceptions of the status of Educational Statistics in awarding B.Ed Degree in Arabic and Islamic Studies. The study concluded that calculating grouped data and testing hypotheses with Chi Square, t-test and others are very difficult to learn for Arabic and Islamic Studies students in Kwara State. The study therefore, recommended that lecturers in Department of Arts Education in all universities in Nigeria should design a way to make the course simpler for Arabic and Islamic Studies students so that at the end of the program the students would be able to perform little analysis.*

**Keywords:** Perceptions, undergraduate students, Arabic and Islamic Studies, status, Educational Statistics

## Introduction

Statistics is a field of knowledge that contributes large portions to the analysis and explanation of results generated from the filed works in research. In education, statistics is an integral component that cannot be removed among the courses that must be passed before a student can graduate in Nigerian universities. Above all, the significance of educational statistics in research cannot be over-emphasised. According to Adenomon (2022) statistics is the process of making inferences from observation in order to tackle real life problems in all aspects of human endeavours including education. Similarly, National Open University of Nigeria (2020) defined statistics as a set of facts or data collected, analyzed and interpreted in order to deduce inferences. This is done through the use of statistical tools such as descriptive and inferential statistical tools. Furthermore, Adelodun and Awe (2013) defined it as the process of gathering, organizing and interpreting data to make meaningful decision. Awe et al. (2015) explained that the statistics was introduced to strengthen students' knowledge of analysis in research.

Statistics can be categorized in to two forms: descriptive and inferential statistics. Awoniyi and Aderanti (2013) described descriptive statistics as a form of statistics where data generated are described with the aid of measures of central of tendencies and variability such as: frequency, percentage, mean, median, standard deviation, range and variance among others. This form of statistics allows researchers to present their results through the use of charts. Inferential statistics on the other hand, is the system of sampling certain representation from the whole population and the data collected would be analyzed and used to draw conclusion (Olosunde, 2005). This type of statistics helps researchers to detect relationships existing among data collected from the population via parametric and non-parametric statistical tools.

Islam is a religion that values calculation and application of values for solving religious, social and political problems in the society. Importance of numbers and calculation in the life of Muslims are numerously mentioned in the Quran and Hadith of Prophet Muhammad (PBUH). Quran says: *"It is We who revive the dead; and We write down what they have forwarded, and their traces. We tallied all things in a clear record"* (36:12). This verse pointed out important aspect of statistics which is tally and record. This shows how Islam values numbers, calculation and recording. In another portion of Quran, Allah says:

*“it is He who made the sun radiant, and the moon a light, and determined phases for it, that you may know number of years and the calculation. Allah did not create all this except with truth. He details the revelation for a people who know” (10:12).* The above verse showed the pivotal position occupied by the application of calculation in Islam. Therefore, Islamic Studies students should be embodiment of the knowledge about number and calculation.

Prophet Muhammad (PBUH) was reported to have said: *“The month (of Ramadan) may consist of twenty nine days; so when you see the new moon observe fast and when you see (the new moon again at the commencement of the month of Shawwal) then break it, and if the sky is cloudy for you, then calculate (and complete thirty days) (Sahih Muslim1081).* This Prophetic statement is confirming the importance of calculation in Islam and to know that without calculation there is no existence. With the aid of calculation many Islamic activities are carried out including *Salah* (prayer), *Sawm* (fasting) and *Hajj* (pilgrimage). Hence, students of Arabic and Islamic Studies are not expected to develop phobia for learning statistics in the universities because the knowledge of educational statistics which is a branch of Mathematics gives students opportunity to present their results logically. Therefore, this study examined perceptions of undergraduate students of Arabic and Islamic Studies in the status of Educational Statistics in awarding B.Ed Degree in Arabic and Islamic Studies.

### **Contents of Educational Statistics in the Faculty of Education in Nigerian universities**

Educational Statistics can be described as scientific techniques applied in transforming information generated from well-planned survey or observation into quantifiable data than can be subjected to quantitative or qualitative analysis in order to deduce reliable inferences from the set hypotheses (Awoniyi & Aderanti, 2013). This is done by researchers in the field of education to get meaningful conclusions or decisions that could be used to solve educational problems in the societies. Educational Statistics is designed to play essential roles in research and among its roles are the following as listed in Awoniyi and Aderanti (2013):

1. Educational Statistics assists researchers transform verbal information into quantifiable expression for the purpose of making meaningful decisions;

2. It helps researchers to analyze data for making credible decisions in research;
3. It enables researchers to describe the characteristics of population and sample in research;
4. It allows researchers to obtain a generalization from the entire population through inferences from quantifiable observation made from sample used; and
5. it enables researchers to develop skills on how to manage and interpret statistical data in research

The contents of Educational Statistics in the Faculty of Education subsume aspects of Statistics under the descriptive and inferential statistics. According to NOUN (2020) Educational Statistics in the Faculty of Education is a compulsory course that all students in the Faculty of Education must pass before having Bachelor in Education irrespective of the department. Educational Statistics designed for undergraduate students in Faculty of Education is majorly centered on descriptive and inferential statistics and therefore the contents of the course could be outlined as follows: meaning and significance of Statistics, concept and roles of educational Statistics, educational research process, evaluation, test and measurement, nominal, ordinal, interval and ratio scales, graphical representation of data (bar chart, histogram and others), measures of central tendency (mean, media & mode) and measures of variability or dispersion (range, mean deviation, standard deviation e.t.c) among others. Therefore, many Arabic and Islamic Studies students in the university find it difficult to pass this course even some change their course just because of Educational Statistics. In addition, some Arabic and Islamic Studies students prefer pursuing their Master Degree in Faculty of Arts where pure Arabic and Islamic Studies is offered because of Educational Statistics as long the status of the course remained unchanged (compulsory) in the Faculty of Education. Therefore, undergraduate Arabic and Islamic Studies students need to be educated on the significance of this course and the role it plays in our academic, political, social and religious lives.

Many scholars from different disciplines had worked on the impact of educational statistics in production of effective and efficient outcomes in research. Badau (2020)'s study on educational management and research performance of universities in North Eastern Nigeria concluded that there is low research performance in educational management in North Eastern universities in Nigeria. This could be traced to high level of phobia attached to

the knowledge of educational statistics which forms the bedrock for the production of viable and reliable research in the universities.

Similarly, Aina et al. (2021) observed that application of educational statistics tools in analyzing data in research is facing multi-faceted challenges in among Nigerian graduate due to corruption, laziness, poor supervision and high rate of attrition among others. It shows from this submission that poor supervision and laziness are the problems that strengthen Arabic and Islamic Studies students' phobia in developing interest in learning educational statistics. Furthermore, Ndayebom and Aregbesola (2023) discovered that poor mentorship, corruption, mismanagement, weak research instruction and brain-drain to mention a few are among the major problems that make learning educational statistics more difficult for the students to enjoy. This implies that if Arabic and Islamic Studies students could discover the immense benefits in learning educational statistics they might have preferred pursuing high degrees in Education.

Undergraduate Arabic and Islamic Studies students in the Faculty of Education need to be treated as education students and therefore educational statistics is an unavoidable course for all students in the Faculty of Education. Ubom et al. (2019) suggested that effective research leads to productivity, creativity and sustainability in all aspects of human life and the sensitive part of research is logical presentation of findings. Hence, without the knowledge of educational statistics, analysis and presentation of findings will be difficult.

### **Objectives of the Study**

The aim of this study was to examine perceptions of undergraduate students of Arabic and Islamic Studies in the status of Educational Statistics in awarding B.Ed Degree in Arabic and Islamic Studies in Kwara State, Nigeria. Specifically, the study investigated:

1. The aspect of educational statistics that is difficult for undergraduate Arabic and Islamic Studies students to learn in research methodology
2. Undergraduate Arabic and Islamic Studies students' perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies based on gender

3. Undergraduate Arabic and Islamic Studies students' perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies based on type of institution

### **Research Questions**

The following research questions were answered during the course of the study:

1. Which aspect of educational statistics is difficult for undergraduate Arabic and Islamic Studies students to learn in research methodology?
2. How do undergraduate Arabic and Islamic Studies students perceive the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies based on gender?
3. What is the level of undergraduate Arabic and Islamic Studies students' perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies based on type of institution?

### **Research Hypotheses**

H<sub>01</sub>: there is no significant difference between male and female undergraduate Arabic and Islamic Studies students' perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies.

H<sub>02</sub>: there is no significant difference between public and private undergraduate Arabic and Islamic Studies students' perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies.

### **Methodology**

This study examined undergraduate Arabic and Islamic Studies students' perceptions of the status of Educational Statistics in awarding B.Ed Degree in Arabic and Islamic Studies in Kwara State, Nigeria. The descriptive survey research design was used in the study. The population of the study was all undergraduate students in all universities in Kwara State. Simple random sampling technique was used to sample three universities from all ten universities available in Kwara State (one public and two private universities).

Similarly, simple random sampling technique was used to sample 100 Arabic and Islamic Studies students of 200L from each sampled university in Kwara State and therefore a total number of 300 respondents were used in the study. Hence, 100 Arabic and Islamic Studies students were sampled from public and 200 from private sampled universities in Kwara State. 180 male and 120 female undergraduate Arabic and Islamic Studies students were sampled from all selected universities in Kwara State.

The instrument used in the study was a researcher self-developed questionnaire titled “perceptions of undergraduate students of Arabic and Islamic Studies in the Status of Educational Statistics in awarding B.Ed Degree in Arabic and Islamic Studies” (PUSAISSESDAIS). The instrument was divided into two sections A & B. Section A described the demographic data of the respondents while B contained two different sections: A hosted five items on the aspects that undergraduate Islamic Studies students find difficult and B embodied five items on Arabic and Islamic Studies students’ perceptions of the status of Educational Statistics in awarding B.Ed Degree in Arabic and Islamic Studies. Different likert scales such as: Highly Difficult (HD), Slightly Difficult, and Not Difficult (ND) and Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) were used for sections A, & B respectively.

Both descriptive and inferential statistics tools were used in the study; frequency count and percentage were used to describe demographic data of the respondents. Mean and standard deviation were used to answer research questions while independent t-test was used to test all hypotheses at 0.05 level of significance.

## Results

**Table 1:** Demographic presentation of undergraduate Arabic and Islamic Studies students

Variable	Frequency	Percentage
Gender		
Male	180	60.0
Female	120	40.0
Total	<b>300</b>	<b>100.0</b>
Type of Institution		
Public	100	33.3
Private	200	66.7
Total	<b>300</b>	<b>100.0</b>

Table 1 displayed that out of 300 undergraduate Arabic and Islamic Studies students sampled in the study, 180 (60%) were males while 120 (40%) were females undergraduate Arabic and Islamic Studies students. This showed that the population of male students of Arabic and Islamic Studies participated in this study was higher than the population of female of Arabic and Islamic Studies. Similarly, the table presented that 100 (33.3%) was sampled from public university while 200 (66.7%) was sampled from private universities in Kwara State. This also implied that the percentage of respondents sampled in private universities was higher than the percentage of respondents from public university.

### Answering Research Questions

**Research Question 1:** Which aspect of educational statistics is difficult for undergraduate Arabic and Islamic Studies students to learn in research methodology?

**Table 2:** Aspect of educational statistics that is difficult for undergraduate Arabic and Islamic Studies students to learn in research methodology

S/N	ITEMS	HD	%	SD	%	ND	%
	Tabulating grouped data In Educational Statistics is difficult	160	53.3	92	30.7	48	16
	I attempt questions on mean, media and mode of ungrouped data	0	0	40	13.3	260	86.7
	I find it difficult to draw bar charts and histogram	137	45.7	106	35.3	57	19.0
	I can differentiate between continuous and categorical data in Statistics	83	27.7	126	42.0	91	30.3
	Calculating t-test, Chi Square and others are my major problems in Educational Statistics	234	78.0	66	22.0	0	0

**Note:** HD=Highly Difficult, SD= Slightly Difficult, ND= Not Difficult

Table 2 displayed that items 1 & 5 are the aspects of Educational Statistics that are difficult for Arabic and Islamic Studies undergraduate to learn due to high percentage of Arabic and Islamic Studies students that find them difficult. This is the reason why many Arabic and Islamic Studies students running away from education just because of Educational Statistics.

**Research Question 2:** What is the level of undergraduate Arabic and Islamic Studies students’ perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies?

**Table 3:** The level of undergraduate Arabic and Islamic Studies students’ perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies

S/N	ITEMS	SA	A	D	SD	X	SD	Decision
	I perceive Educational Statistics the most difficult course for me in the department	160	140	0	0	3.53	0.500	High
	I always get low grade in Educational Statistics due to my lack of good background in Mathematics	100	131	49	20	3.04	0.874	High
	Educational Statistics status should be reviewed in such a way that the decision will favour Arabic and Islamic Studies students	200	100	0	0	3.67	0.472	High
	I see the status of Educational Statistics in the Faculty of Education is considerate	100	171	20	9	3.21	0.692	High
	The status of Educational Statistics is normal because it is a compulsory course in the Faculty	131	100	40	29	3.11	0.974	High
Average Mean						3.21		High

**Note:** SA=Strongly Agree, A=Agree, D=Disagree, SD=Strongly Disagree, X=Mean, SD=Standard Deviation

Table 3 revealed that the level of undergraduate Arabic and Islamic Studies students’ perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies is high with average mean of 3.21. Similarly, the mean recorded in all items were high which implied that undergraduate Arabic and Islamic Studies students’ phobia towards learning the course is very high. This might be the reason why only very few among Arabic and Islamic Studies students put interest in learning educational statistics in the Faculty of Education.

**Testing Hypotheses**

H01: there is no significant difference between male and female undergraduate Arabic and Islamic Studies students’ perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies.

**Table 4:** Independent t-test showing significant difference between male and female undergraduate Arabic and Islamic Studies students’ perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies

Variable	N	Mean	SD	df	t	sig.	Decision
Male	180	13.76	1.320	298	-5.52	0.000	Rejected
Female	120	14.52	0.894				

**Source:** Data output from SPSS (version 25<sup>th</sup>) (2024).

Given that t-value of -5.52, df=298 and p-value  $0.000 < 0.05$ , therefore the result of independent sample t-test showed that there was significant difference between male and female undergraduate Arabic and Islamic Studies students' perception of the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies in Nigeria. This implied that both male and female undergraduate students of Arabic and Islamic Studies have different perceptions on the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies. It also showed the mean scores of 14.52 that female students of Arabic and Islamic Studies have make them have high perception on the difficulty of the course among compulsory courses in the Faculty of Education.

H02: there is no significant difference between public and private undergraduate Arabic and Islamic Studies students' perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies.

**Table 5:** Independent t-test showing significant difference between public and private undergraduate Arabic and Islamic Studies students' perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies

Variable	N	Mean	SD	df	t	sig.	Decision
Public	100	13.90	1.321	298	-1.739	0.065	Not Rejected
Private	200	14.15	1.168				

**Source:** Data output from SPSS (version 25<sup>th</sup>) (2024)

Given that t-value of -1.739, df=298 and p-value  $0.065 > 0.05$ , therefore the result of independent sample t-test showed that there was no significant difference between public and private undergraduate Arabic and Islamic Studies students' perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies. This implied that both public and private undergraduate students of Arabic and Islamic Studies have similar perceptions on the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies. It also showed the mean scores of 14.15 that private students of Arabic and Islamic Studies have make them consider the course more difficult for the students of Arabic and Islamic Studies.

## **Discussion**

The findings of the study showed that the population of male undergraduate students of Arabic and Islamic Studies participated in this study were higher than the population of female. Similarly, the percentage of respondents sampled in private universities was higher than the percentage of respondents from public university in Kwara State. Furthermore, the findings of the study displayed that majority of undergraduate students of Arabic and Islamic Studies were not good enough in tackling some aspects of Educational Statistics this was showed in their perception about the difficulty of the course with average mean score of 3.21. This is line with the study of Adenomom (2022) that students are not well introduced into the knowledge of real Statistics at secondary school level which paves way for unnecessary anxiety for the course at tertiary institutions.

In the same vein, the findings of the study showed that there was significant difference between male and female undergraduate Arabic and Islamic Studies students' perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies and the finding showed that female have high difficulty in taking the course. This showed that male students of Arabic and Islamic Studies are trying to tackle the contents averagely. The findings also revealed that there was no significant difference between public and private undergraduate Arabic and Islamic Studies students' perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies and the result confirmed that undergraduate students of Arabic and Islamic Studies in private universities in Kwara State encountered much difficulty in tackling some aspects in the course.

## **Conclusion**

Based on the findings of the study, it was concluded that calculating grouped data and testing hypotheses with Chi Square, t-test and others are very difficult to learn for Arabic and Islamic Studies students in Kwara State. It was also concluded in study that the level of undergraduate Arabic and Islamic Studies students' perception in the status of educational statistics in awarding B.Ed Degree in Arabic and Islamic Studies is high with average mean of 3.21.

## Recommendations

The study recommended that:

1. Lecturers in Department of Arts Education in all universities in Nigeria should design a way to make the course simpler for Arabic and Islamic Studies students so that at the end of the program the students would be able to perform little analysis.
2. University management should try to lessen difficulty aspects of Educational Statistics for all students in the Department by arranging extra class tutorial irrespective of students' gender.
3. Qualified lecturers in the field of Educational Statistics should be employed in both public and private universities in Kwara State to reduce the difficulty status of Statistics for all students.

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