

**EFFECT OF COMPUTER INSTRUCTIONAL PACKAGE ON ACHIEVEMENT OF SENIOR SECONDARY SCHOOL FINANCIAL ACCOUNTING STUDENTS IN BWARI AREA COUNCIL, FCT, ABUJA**

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**Abstract**

The study examined the effects of Computer Instructional Package on academic achievement of senior secondary school Financial Accounting students in Bwari Area Council FCT, Abuja. Two research questions and hypotheses guided the study. The study employed quasi-experimental research design involving the non-equivalent pretest, posttest, control group design. The population comprised 3,310 (1750 male and 1350 female) SS II Financial Accounting students from the seven secondary schools for the 2021/2022 academic session. A sample of 80 (48 male and 32 female) SS II Financial Accounting students was selected from two co-educational secondary schools in Bwari Area Council FCT, Abuja using multistage sampling procedure. Data was collected using Financial Accounting Achievement Test (FAAT). The logical validity index of 0.79 for FAAT and the reliability coefficient of 0.874 for FAAT was obtained using Kuder-Richardson methods for FAAT. Mean and standard deviation was used to answer the research questions while Analysis of Covariance (ANCOVA) was used to test the hypotheses at 0.05 alpha. The study revealed that students taught Financial Accounting using the Computer Instructional Package recorded higher achievement than students taught using the conventional method, The study concluded that Computer Instructional Package was very effective in the teaching and enhancement of senior secondary school students' academic achievement in Financial Accounting. It was recommended among others that Financial Accounting teachers at the secondary school level should use Computer Instructional Packages in the teaching of Financial Accounting to senior secondary school students in order to enhance their academic achievement in Financial Accounting.

**Key words:** Academic Achievement, Computer Instructional Package and Financial Accounting

**Introduction**

Financial Accounting is the process of identifying, measuring and communicating economic information to permit informed judgments and decisions by users of the information. According to Dheeraj (2018), Financial Accounting is the systematic procedure of recording, classifying, summarizing, analyzing, and reporting business transactions. The primary objective is to reveal the profits and losses of a business, which involves the preparation of income and expenditure statements, cash-flow statement and

the balance sheet; hence it provides a true and fair evaluation of a business. In other words, Financial Accounting is a branch of accounting which involves the preparation of financial statements by business entities to show their financial health and prospects to the stakeholders and general public.

According to Ishaq (2011), Financial Accounting at the senior secondary school level provides background instruction to assist students in preparing for professional careers that require advanced studies in Financial Accounting as well as financial accounting skills for personal use in the future. Hence, the secondary school Financial Accounting is meant to prepare students for the challenges of the business world. The inclusion of Financial Accounting as a subject at the secondary school level of education is to prepare students for careers in the book-keeping and Financial Accounting field, fundamental instruction to help students assume their economic roles as consumers, workers and citizens, background instruction to assist students in preparing for other professional careers requiring advanced study in book-keeping and accounting as well as book-keeping and Financial Accounting skills for personal use in the future with particular emphasis on wise planning of income and expenditure. Despite the noble objectives of Senior Secondary (SS) Financial Accounting, the academic achievements of students at the external examination continue to decline in Federal Capital Territory (FCT), Abuja, Bwari Area Council in particular. This is evident in the dismal academic achievement recorded in Financial Accounting by students at the secondary school level over the years. Thus, Akuezilo (2021) posited the problems of secondary school students in Financial Accounting stated the following failure rates at National level of students in National Examination Council (NECO) Financial Accounting examination for three consecutive years; 2018–52.4%, 2019–58.21% and 2020 – 50.85%. This implies that the rate of failure is slightly higher than the credit pass rate. Furthermore, an analysis carried out by the researcher revealed that students' achievement in NECO SSCE on Financial Accounting in FCT, Abuja showed the following achievement rates for a period of three consecutive years.

Low performance of students could be attributed to the way they have been taught, poor choice of instructional strategies, lack of qualified teachers and overcrowded classroom, among others. In recent years there has been remarkable global advancement in Computer Instructional Package (CIP) with a resultant transformation of classroom teaching and learning through the provision of alternatives to the conventional teaching methods. One of the major innovations in the teaching and learning process is the use of computer instructional package, which is an automated learner oriented technique that utilizes computer to present instructions to the learners in an interactive approach. Oak (2012) opined that computer instructional package has made deep impact on the education sector which is attributable to the capacity to store large volume of data and rapid processing of data; hence can be used as teaching aids since teachers and students can use the internet to search information on any given subject.

Computer instructional package facilitates acquisition of important cognitive skills through the access of computer assisted instruction by drill and practice, multi-media simulations and financial modeling in Financial Accounting. According to Premuroso

(2021), the use of classroom computer instructional packages may create a more dynamic teaching and learning environment compared to the traditional lecture method. In other words, it provides practical and private learning experience that permits students to learn at their own pace, hence the students bear more responsibility than the teachers. Thus, the spreadsheet software such as Microsoft excel can be used to analyze financial information, perform calculations and to create forecasting models. It can also be used for financial modeling in the preparation of cash-flow forecasts, balance sheet, trading profit and loss account.

Gender is a prominent variable in our schools especially in Nigeria. Gender refers to the socially, culturally constructed characteristics roles which are ascribed to male and female in any society. The issue of gender difference in academic performance has generated a recurring debate among academicians over the years especially in relation to quantitative subjects. Ese and Oludare (2020) observed that the use of computer simulation package had significant effect on students' academic performance, but without any significant effect on gender. Similarly, Echedo and Ebere (2021) revealed that there was significant difference between the mean achievement scores of the students taught financial accounting using computer assisted instruction and those taught using the lecture method; there was significant difference between the mean achievement scores of male and female students taught financial accounting using computer assisted instruction. Likewise,

Mudashiru and Adedeji (2020) showed that the performance of students exposed to CAI either individually or cooperatively were better than their counterparts exposed to the conventional classroom instruction. The inclusion of gender as moderator variable was to determine any differences that may be attributed to it in the study. The rationale for the choice of Financial Accounting in this study was based on the fact that it is one of the compulsory subjects studied at SS level in Nigeria and FCT, Abuja in particular.

The aim of this study was to determine the effect of computer instructional packages on achievement and interest of senior secondary school students in Financial Accounting in FCT, Abuja. Specifically, this study intended to:

1. determine the mean achievement scores of students taught Financial Accounting using computer instructional package and the students taught using conventional lecture method in FCT, Abuja.
2. ascertain the mean achievement scores of male and female students taught Financial Accounting using the computer instructional package in FCT, Abuja.

### **Research Questions**

The following research questions guided the study:

1. What are the mean achievement scores of students taught Financial Accounting using computer instructional package and the students taught using the conventional method in Bwari Area Council FCT, Abuja?
2. What are the mean achievement scores of male and female students taught Financial Accounting using the computer instructional package in Bwari Area Council FCT, Abuja?

### Hypotheses

The following hypotheses formulated were tested at 0.05 level of significance:

**Ho<sub>1</sub>:** There is no significant difference in the mean achievement scores of students taught Financial Accounting using the computer instructional method and the students taught using the conventional lecture method in Bwari Area Council FCT, Abuja.

**Ho<sub>2</sub>:** There is no significant difference in the mean achievement scores of male and female students taught Financial Accounting using the computer instructional package in Bwari Area Council FCT, Abuja.

### Methodology

The study employed quasi-experimental research design involving the non-equivalent pretest, posttest, control group design. The population comprised 3,310 (1750 male and 1350 female) SS II Financial Accounting students from the seven secondary schools in Bwari Area Council FCT, Abuja for the 2021/2022 academic session. A sample of 80 (48 male and 32 female) SS II Financial Accounting students was selected from two co-educational secondary schools in Bwari Area Council FCT, Abuja using multistage sampling procedure. Data was collected using Financial Accounting Achievement Test (FAAT) which contained 50 items of multiple-choice questions based on the school curriculum. Each item contained four options indicated (A-D) from which the students were expected to choose one correct answer. The topics and content areas that FAAT covered were ledgers and journals; trading, profit and loss accounts; errors and trial balance; balance sheet and balance sheet equations.

The logical validity index of 0.79 for FAAT and the reliability coefficient of 0.874 for FAAT was obtained using Kuder-Richardson method for FAAT. Mean and standard deviation was used to answer the research questions while Analysis of Covariance (ANCOVA) was used to test the hypotheses at 0.05 alpha.

### Results

**Research Question 1:** What are the mean achievement scores of students taught Financial Accounting using the computer instructional package and the students taught using the conventional method in Bwari Area Council FCT, Abuja?

**Table 1: Mean and Standard Deviation for Students' Achievement based on two methods**

Group		Pretest	Posttest
CIP	Mean	22.68	35.57
	N	40	40
	Std. Deviation	5.225	5.262
CM	Mean	23.85	30.60
	N	40	40
	Std. Deviation	3.309	4.043

The above table 1 shows that the mean scores of students taught using the computer instructional package and students taught using the conventional method were 22.68 and

23.85 respectively for the pretest; while the post-test mean scores were 35.57 and 30.60 for students taught using the computer instructional package and the students taught using the conventional method respectively. It could also be observed that the standard deviations for students taught using the computer instructional package and students taught using the conventional method were 5.225 and 3.309 respectively for pretest, while the posttest standard deviations were 5.262 and 4.043 for students taught using the computer instructional package and students taught using the conventional method respectively.

**Research Question 2:** What are the mean achievement scores of male and female students taught Financial Accounting using the computer instructional package in Bwari Area Council FCT, Abuja?

**Table 2: Mean and Standard Deviation for male and female Students' Achievement based on two methods**

Gender CIP		Pretest	Posttest
Male	Mean	22.81	35.96
	N	26	26
	Std. Deviation	5.926	5.422
Female	Mean	22.43	34.86
	N	14	14
	Std. Deviation	3.777	5.067

The above table 2 that the mean scores of male and female students taught using the computer instructional packages were 22.81 and 22.43 respectively for the pretest; while the post-test mean scores were 35.96 and 34.86 for male and female students respectively. It could also be observed that the standard deviations for male and female students were 5.926 and 3.777 respectively for pretest, while the posttest standard deviations were 5.422 and 5.067 for male and female students respectively.

**Hypothesis 1:** There is no significant difference in the mean achievement scores of students taught Financial Accounting using the computer instructional package and the students taught using conventional method in Bwari Area Council FCT, Abuja.

**Table 3: Summary of ANCOVA for Students in FAAT**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	702.281 <sup>a</sup>	2	351.141	17.905	0.000	0.317
Intercept	1588.842	1	1588.842	81.015	0.000	0.513
Pretest	207.269	1	207.269	10.569	0.002	0.121
Group	575.355	1	575.355	29.337	0.000	0.276
Error	1510.106	77	19.612			
Total	89795.000	80				
Corrected Total	2212.387	79				

a. R Squared = .317 (Adjusted R Squared = .300)

S = Significant at P < 0.05

The above table 3 shows the ANCOVA result of students in FAAT for the experimental group taught using computer instructional package and the control group taught using the conventional method. The result revealed that the difference in scores between the experimental and control groups is significant at 0.05 alpha level based on the fact that  $F = 29.337$  and  $P = 0.000 < \alpha = 0.05$ . The null hypothesis was therefore rejected, which implied that there was significant difference in mean achievement scores of students taught financial accounting using the computer instructional package and students taught using the conventional method`

**Hypothesis 2:** There is no significant difference in the mean achievement scores of male and female students taught Financial Accounting using the computer instructional package in Bwari Area Council, FCT, Abuja.

**Table 4: Test of ANCOVA for Male and Female Students Achievement scores in FAAT**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	66.928 <sup>a</sup>	2	33.464	1.222	0.306	0.062
Intercept	1796.722	1	1796.722	65.636	0.000	0.640
Pretest	55.829	1	55.829	2.039	0.162	0.052
GenderACIP	9.410	1	9.410	0.344	0.561	0.009
Error	1012.847	37	27.374			
Total	51703.000	40				
Corrected Total	1079.775	39				

a. R Squared = .062 (Adjusted R Squared = .011)

S = Significant at  $P < 0.05$

The above table 4 shows the ANCOVA result of male and female students in FAAT for the group taught using computer instructional package. The result revealed that the difference in scores between male and female students is not significant at 0.05 alpha level based on the fact that  $F = 0.344$  and  $P = 0.561 > \alpha = 0.05$ . The null hypothesis was therefore accepted, which implied that there was no significant difference in mean achievement scores of male and female students taught Financial accounting using computer instructional package.

### Discussion of Findings

Findings based on Hypothesis I indicated that there is significant difference in mean achievement scores of students taught financial accounting using the computer instructional package and students taught using the conventional method. This finding is in agreement with the findings of Ese and Oludare (2020); Echedo and Ebere (2021) which revealed that there was significant difference between the mean achievement scores of the students taught financial accounting using computer assisted instruction and those taught using the lecture method; there was significant difference between the mean achievement scores of male and female students taught financial accounting using computer assisted instruction.

Findings based on Hypothesis 2 indicated the difference in scores between male and female students was not significant at 0.05 alpha level based on the fact that  $F = 0.344$  and  $P = 0.561 > \alpha = 0.05$ . The result agrees with earlier findings of Mudashiru and Adedeji (2020) which revealed that there was no significant difference in the performance of male and female students exposed to computer assisted instruction in either individual or cooperative setting.

### **Conclusion and Recommendations**

It is clearly seen that the students taught financial accounting using the computer instructional package obtained higher achievement scores than students taught using the conventional method, hence computer instructional package was very effective in the teaching and enhancement of senior secondary school students' academic achievement in financial accounting. Also, gender is of little or no effect on general students' achievement in financial accounting. Based on the findings of this study, recommendations were made as follows:

1. Financial accounting teachers at the senior secondary school level should use computer instructional packages in the teaching of financial accounting to senior secondary school students in order to enhance their academic achievement in financial accounting.
2. Teachers generally should be given the opportunity to undergo some in-service training in the effective use of computer instructional packages in the teaching and learning process at the secondary school level

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