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Utilization of Artificial Intelligence in Teaching Accounting Courses for Improved Operation of Business Educators in State-Owned Universities in South-South

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ABSTRACT

The study sought to examine the utilization of artificial intelligence in the teaching of accounting courses in state-owned universities in south-south, Nigeria. Two objectives, two research questions and two hypotheses guided the study. A descriptive research design was adopted in the study. The population of the study comprised of 83 respondents from the six state-owned universities in south-south. The entire population was used for the study since it was manageable. The instrument for data collection was a self-structured questionnaire titled "Questionnaire on utilization of artificial intelligence in the Teaching of accounting courses (QUAITAC)". The instrument was validated by the experts, two from Business Education and from Measurement and Evaluation all in faculty of Education. Pearson product moment correlation coefficient (PPMC) was used to establish the reliability of the instrument and a reliability coefficient of 0.82 was achieved. Mean and standard deviation was used to analyze the data and analysis of variance (ANOVA) was used to test the hypotheses at 0.05 level of significance. Findings in the study shows that; Sage 50cloud AI and QuickBook AI were not utilized for teaching accounting courses in state-owned universities in south-south, Nigeria. Based on the findings, conclusions and recommendations were made by the researcher.

INTRODUCTION

Accounting is the recording, classifying, creating, summarizing and communicating of financial information to interested parties and interpreting it to help in making specific business decisions (Lumen, 2021). Accounting records are kept to calculate the performance and profitability of the business organization, prevent fraud, monitoring of the progress of the organization and as well as making economic decisions. The purpose accounting is to ensure that learners are able to acquire the following competencies record, analyze and interpret financial data in order to make informed decisions; present and/or communicate financial information effectively by using generally accepted accounting practice in line with current legislation. Others are ability to relate skills, knowledge and values to real-world situation to ensure balance between theory and practice and enter the work-place and/or move to higher education: organize and manage own finances and activities responsibly and effectively. Also, apply principles to solve problems; develop critical, logical and analytical abilities and thought processes and

apply these skills to new situations. Develop ethical behavior, sound judgment, thoroughness, orderliness, accuracy and neatness; and deal confidently with the demands of an accounting occupation. Annapoorna (2022) defined accounting as the process of recording, classifying, selecting, measuring, interpreting, summarizing and reporting financial data of an organization to the users for objective assessment and decision making. Among the courses taught in accounting are Financial Accounting, Auditing, Cost Accounting, Management Accounting, Budgetary Accounting, Tax Accounting, Public Sector Accounting, Taxation etc.

Management accounting (managerial accounting) is a branch of accounting that is concerned with the identification, measurement, analysis, and interpretation of accounting information so that it can be used to help managers make informed operational decisions (Corporate Finance Institute, 2022). Tuovila (2021) describes it as the practice of identifying, measuring, analyzing, interpreting, and communicating financial information to managers for the pursuit of an organization's goals. Topper (2021) defined management accounting as a process of providing financial information and resources to the managers in decision making. Management accounting is only used by the internal team of the organization, and this is the only thing which makes it different from financial accounting. Management accounting is focused on internal reporting to aid decision-making.

The introduction of technology especially artificial intelligence (AI) in every sphere of endeavor including accounting has changed the narrative of perception of accounting practice where artificial intelligence is now used to enhance the entire accounting processes. There are different artificial intelligence that are available in accounting practice today. Some of them are; Sage cloud, QuickBook, Xero, Enterprise Resource Planning (ERP), Wave, ZipBook etc. (Asaolu,2022).

Sage 50cloud Accounting AI, formerly known as Peachtree was rebranded in 2013 (Tankersley, 2023). It is a classic AI that simplifies our everyday accounting tasks and provides the insights to run businesses more efficiently. Peachtree accounting software, now known as Sage 50cloud, offers a desktop installation for performance and security, robust functionality for accuracy, compliance, and control and intuitive interface for easy adoption and use.

Quick-book is another accounting AI package that was developed and marketed by Intuit. Quick-book products are geared mainly towards small and medium-sized businesses and offer on-premises accounting applications as well as cloud-based versions that accept business payments, manage and pay bills, and payroll functions (Atsoft-Global Technologies Ltd, 2021).

Sage 50cloud Accounting Package

Sage 50cloud accounting package is of immense significance and importance to both businesses and organization according to Hla and Teru (2025) as it facilitates management decision making, quality of the financial report, internal controls, and the company's transaction besides playing a crucial role in economic system. Sage 50cloud accounting package previously known as Peachtree Accounting is an accounting software that is used to process accounting transactions and makes bookkeeping simple and easy.

This computerized accounting software makes bookkeeping easy for individuals who have not completed formal accounting education in a university or college. According to Hla and Teru (2025), this software boasts powerful features that streamline accounting function for a company for maximum efficiency and productivity.

According to Sandy (2020), some of the benefits of developing accounting skills using Sage accounting software are detailed below;

- 1. Efficient Bookkeeping and Financial Management:** Sage accounting software simplifies accounting function that results in efficient bookkeeping and financial analysis of its users. The computerised accounting software streamlines accounting function, with the use of Sage accounting software, invoices can be prepared on time, account receivables can be analyzed, cash flow position can be determined and suppliers can be paid without delay.
- 2. Accurate and Timely Preparation of Reports:** Another great benefit of the use of Sage accounting software is that it allows accurate and timely preparation of financial reports.

Financial reporting is an important aspect of bookkeeping. And this task can easily be performed with Sage accounting software. The accounting software allows easy preparation of graphs, charts, and other reports that give a snapshot of the company's financial position during a particular duration.

3. **Payment of Taxes:** Paying taxes is an important accounting activity for both large and small firms. Company taxes have to be accurately filed and on time. Delays or entering wrong information when filing taxes results in imposition of fines by the tax authority. Sage accounting tax add-on ensures accurate and timely filing of tax forms. Using the taxation add-on helps in avoiding penalties and fines that occur as a result of wrong or delayed filing of tax forms.
4. **Business Planning Made Easy:** Sage accounting software allows easy preparation of profit and loss accounts and statement of financial position of a firm. The profit and loss account statement shows the financial performance of a company during a particular period, while the balance sheet (statement of financial position) shows financial position of assets, liabilities, invested capital etc of the company during a specific period of time. Both of these statements are used by the management to make strategic business plans and ensure that the business in on the right track financially and shows true and fair view of the company.
5. **Full Payroll Services:** Preparing payroll reports and distributing salaries to the employees of a company is an important accounting function that is made easy with the use of Sage accounting software. The computerised accounting software simplifies processing of payroll data and ensures that the right amount is debited to employees' salary accounts. Sandy (2020) concluded by saying that Sage computerised accounting software is arguably the best when it comes to recording and organising financial information of a company.

Quick-Book Accounting Package

Accounting education has been revolutionized by the introduction of computer technology into learning. Quick-book software created and sold by Intuit, Inc. is the most predominantly used accounting software among small businesses and as such, large amounts of financial data and information are created, edited, and stored using Quick-book. A large majority of these companies will rarely, if ever, have their financial statements or internal control structures audited. However, the accuracy and security of this information is still vitally important. Quick-book is an accounting software (package) that is used to process accounting transactions. According to Gibbs (2024), Quick-book provides its users with the following features: chart of accounts, customized invoices, track accounts payable, track accounts receivable, profit and loss statement, balance sheet and manage cash flows. This software is being used by small businesses and medium sized entrepreneurs. Quick-book software provides the quick payroll software which is used in processing employee salaries. In spite of the widely held views that accountants need skills in the selection, implementation, management and use of information technologies at their work place, universities appear to be approaching the accounting education, embedding current and emerging information technologies in the teaching and learning of accounting in the curriculum in order to be able to produce graduates with skills that are in demand and graduates that are work ready (Drennan, 2025). Drennan further buttressed that integrating new technologies such as Quick-book into teaching and learning entails making Quick-book to become part and parcel of teaching and learning of accounting in tertiary institutions.

In line with the above assertion, Marriot (2025) argues that using computer simulations and Quick-book models as pedagogical approaches can enhance the experiential learning opportunities particularly for students who prefer more abstract and theoretical learning styles. By focusing on the financial management field, Marriot (2025) finds that such an approach offers an enjoyable, challenging and rewarding learning experience to students. Edwards (2025) agreed that by using interactive multimedia technology in teaching accounting information system cycles, it can replicate the learning experiences provided in a practical environment and thus, offer virtually real world situations to the students. Edward stated that by doing this, the students are presented with the opportunity to participate and ultimately obtain valuable insights from this context rich learning environment. The computer technology is often

manifested as an effective approach to teach accounting as it allows faculty members to change the delivery method and avoid rigidity in the process. Ian and Nathan (2020) are in agreement on the contention that educational software technology such as Quick-book offers flexibility and has a profound effect on accounting education in higher institutions and arguably can bring a host of positive outcomes to the students' learning process. However, Ian and Nathan warn that any initiative to embark on new technologies in teaching should be thoroughly thought rather than accepting them blithely and unquestionably.

McKee (2024) gave experimental evidences in relation to the application of customized multimedia software (Quick-book) in teaching cost and managerial accounting subjects. The anecdotal evidence according to McKee suggests that by using such software (Quick-book), it effectively increases students' understanding of the basic components of a cost system. McKee further stated that Quick-book offers a multisensory experience and serves as an interactive avenue for the students to better see the connections between an array of account components.

Ray (2024) carried out a research study titled "The use of accounting Ai for effective teaching and learning introductory accounting in tertiary institutions in Rivers State". Findings of the study showed among others shows that Business Educators in tertiary institutions in Rivers State rarely utilize accounting Ai for research and teaching.

Mohammed (2020) carried out a study on the Impact of Accounting Ai Utilization on students' knowledge acquisition (case study: The students of the Administrative Sciences College-Najran University). The findings revealed that there is strong relationship between accounting software system and students' knowledge acquisition, which means access to accounting information, will lead to educational effectiveness.

Connell, (2021) conducted a study titled "An experiment to assess the learning benefits of employing accounting Ai in the classroom". The findings showed that the use of accounting software in the classroom eliminate manual calculations, access up-to-date financial information on the go and ensures better collaboration between students and teachers.

Statement of the problem

The advent of information and communication technology in every sphere of human endeavor has transformed and improved the mode of operation in these sphere including accounting profession. The introduction of Artificial Intelligence in every field to speed up and ensure effective and efficient productivity has yielded quite a lot of results. The need to use AI in the teaching of accounting has been a major discuss in the front burner of the accounting practice where accounting students are expected to be taught accounting courses with these AI (softwares) since they are the ones to be utilized in the offices where they would work upon graduation. It has been observed that most accounting courses in Business Education peogramme are taught with the old pattern against the digital mode of instruction where students are introduced to modern accounting practices through the use of softwares. This issue is now a great concern as artificial intelligence has been introduced in today's accounting practice. It is on this ground that this study seeks to ascertain the utilization of artificial intelligence in the teaching of accounting courses in state-owned universities in south-south, Nigeria.

Purpose of the study

The main purpose of this study was to determine the utilization of artificial intelligence in the teaching of accounting courses in state-owned universities in south-south, Nigeria.. Specifically, the study seeks to;

1. Determine the extent of utilization of Sage 50cloud AI in the teaching of management accounting in state-owned universities in south-south, Nigeria.
2. Determine the extent of utilization of QuikBook AI in the teaching of cost accounting in state-owned universities in south-south, Nigeria.

Research Questions

The following research questions guided the study;

1. To what extent is Sage 50cloud AI utilized in the teaching of management accounting in state-owned universities in south-south, Nigeria?

2. To what extent is QuickBook AI utilized in the teaching of cost accounting in state-owned

Wogboroma et al, *Int. J. Innov. Info. Systems & Tech. Res.* 14 (1):298-305, 2026

Hypotheses

The following null hypotheses were formulated for the study and were tested at 0.05 level of significance.

1. There is no significant difference in the mean ratings of respondents in state-owned universities in south-south on the extent of utilization of Sage 50cloud AI in teaching management accounting in south-south, Nigeria.
2. There is no significant difference in the mean ratings of respondents in state-owned universities in south-south on the extent of utilization of QuickBook AI in teaching cost accounting in south-south, Nigeria.

METHODS

The study sought to examine the utilization of artificial intelligence in the teaching of accounting courses in state-owned universities in south-south, Nigeria. Two objectives, two research questions and two hypotheses guided the study. A descriptive research design was adopted in the study. The population of the study comprised of 83 respondents from the six state-owned universities in south-south. The entire population was used for the study since it was manageable. The instrument for data collection was a self-structured questionnaire titled “Questionnaire on utilization of artificial intelligence in the Teaching of accounting courses (QUAITAC). The instrument was validated by the experts, two from Business Education and from Measurement and Evaluation all in faculty of Education. Pearson product moment correlation coefficient (PPMC) was used to establish the reliability of the instrument and a reliability coefficient of 0.82 was achieved. Mean and standard deviation was used to analyze the data and analysis of variance (ANOVA) was used to test the hypotheses at 0.05 level of significance.

RESULTS

Research Question 1: *To what extent is Sage 50cloud AI utilized in the teaching of management accounting in state-owned universities in south-south, Nigeria?*

Table 1: Mean and Standard Deviation on the Extent Sage 50cloud AI is utilized for Teaching Management Accounting in State-owned Universities in South-south.

S/N	Items	\bar{X}_1	SD ₁	Rmk	\bar{X}_2	SD ₂	Rmk	\bar{X}_3	SD ₃	Rmk
1	I utilize Sage 50 cloud to teach accounting students how to facilitate financial decision.	2.05	0.41	LE	2.00	0.40	LE	1.50	0.30	LE
2	I utilize Sage 50 cloud to teach financial reporting.	1.97	0.39	LE	1.85	0.37	LE	1.60	0.32	LE
3	I utilize Sage 50 cloud to teach students internal control.	1.97	0.39	LE	1.6	0.33	LE	1.30	0.26	VLE
4	I utilize Sage 50 cloud to teach students efficient book-keeping	1.87	0.37	LE	1.90	0.38	LE	1.50	0.30	LE
5	I utilize Sage 50 cloud to teach accounting students financial management.	1.92	0.38	LE	1.75	0.35	LE	1.40	0.28	VLE
	Total \bar{x} / SD	9.78	1.94		9.15	1.83		7.30	1.46	
	Grand \bar{x} / SD	1.96	0.39		1.83	0.37		1.46	0.29	

Source: Field Survey, 2025

The analysis in table 1 shows that all the mean responses are at low extent (LE) except two in third group

(1.30 and 1.40) that were at a very low extent (VLE). This indicates that the respondents agreed that sage 50cloud artificial intelligence is not utilized in state-owned universities in south-south to; teach accounting students how to facilitate financial decision., teach financial reporting, teach students internal control, teach students efficient book-keeping and to teach accounting students financial management. The grand mean scores of 1.96,1.83 and 1.46 in the three groups are clear indications that sage50 cloud AI is not utilized for teaching management accounting in state-owned universities in south-south.

Research Question 2: *To what extent is QuickBook AI utilized in the teaching of cost accounting in state-owned universities in south-south, Nigeria?*

Table 2 Mean and Standard Deviation on the Extent QuickBook AI is utilized for teaching cost accounting in state-owned Universities in south - south

S/N	Items	\bar{X}_1	SD ₁	Rmk	\bar{X}_2	SD ₂	Rmk	\bar{X}_3	SD ₃	Rmk
6	I utilize QuickBook to teach students chart of accounts in accounting class	1.92	0.38	LE	1.85	0.37	LE	1.50	0.30	LE
7	I utilize QuickBook to teach students customize invoices in accounting class.	2.00	0.40	LE	1.80	0.36	LE	1.35	0.27	VLE
8	I utilize QuickBook to teach students how to track accounts payable.	1.95	0.39	LE	1.90	0.38	LE	1.30	0.26	VLE
9	I utilize QuickBook to teach students how to track accounts receivable.	1.95	0.39	LE	1.70	0.34	LE	1.55	0.31	LE
10	I utilize QuickBook to teach students how to process payrolls.	1.89	0.38	LE	1.70	0.34	LE	1.55	0.31	LE
Total \bar{x} / SD		9.71	1.94		8.95	1.79		7.25	1.45	
Grand \bar{x} / SD		1.94	0.39		1.79	1.76		1.45	0.29	

Source: Field Survey, 2025

The analysis in table 2 shows that all the mean responses are at a low extent (LE) except two in the third group (1.35 and 1.30) that were at a very low extent (VLE). This indicates the QuickBook artificial intelligence is not utilized to; teach students chart of accounts in accounting class, students customize invoices in accounting class, teach students how to track accounts payable, teach students how to track accounts receivable and teach students how to process payrolls. The grand mean scores of 1.94,1.76 and 1.46 in the three groups are clear indications that QuickBook AI is not utilized for teaching cost accounting in state-owned universities in south-south.

Test of Hypothesis

Hypothesis 1: There is no significant difference in the mean ratings of respondents in state-owned universities in south-south on the extent of utilization of Sage 50cloud AI in teaching management accounting in south-south, Nigeria.

Table 3: Analysis of Variance (ANOVA) on the utilization of Sage 50cloud AI for Teaching Management Accounting

Source of Variance	Sum of Square	of DF	Mean sum of Square	f-ratio	f-crit	Level of sig.	Decision
Between Group	0.02	2	0.01	0.003	3.88	0.05	

Accepted

Within Group	44.9	12	3.8
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Source: **Wogboroma et al, Int. J. Innov. Info. Systems & Tech. Res. 14 (1):298-305, 2026**

The analysis in table 3 indicates that the value of the F-critical (3.88) is higher than the value of the F-ratio (0.003), thus, the hypothesis was accepted. Therefore, there is no significant difference in the mean ratings of respondents in state – owned universities in south – south on the extent of utilization of sage 50cloud artificial intelligence for teaching management accounting.

Hypotheses 2: There is no significant difference in the mean ratings of respondents in state-owned universities in south-south on the extent of utilization of QuickBook AI in teaching cost accounting in south-south, Nigeria.

Table 4: Analysis of Variance (ANOVA) on the Utilization of QuickBook AI for Teaching Cost Accounting

Source of Variance	Sum of Square	DF	Mean sum of Square	f-ratio	f-crit	Level of sig.	Decision
Between Group	0.02	2	0.01	0.003	3.88	0.05	Accepted
Within Group	453.2	12	37.8				

Source: Field Survey, 2025

The analysis in table 4 indicates that the value of the f-critical (3.88) is higher than the value of the f-ratio (0.003) thus, the hypothesis was accepted. Therefore, there is no significant difference in the mean ratings of respondents in state – owned universities in south – south on the extent QuickBook artificial intelligence is utilized for teaching cost accounting.

DISCUSSION OF FINDINGS

The discussion of findings in this study were done based on the purposes of the study.

Extent of Utilization of Sage 50cloud AI for teaching management accounting in State-Owned Universities In South-South

The findings in table one indicates that all mean responses are at a low extent. This shows that sage50 Cloud is not utilized in state-owned universities to teach students the following; financial reporting, internal control, efficient book-keeping and financial management.

This finding is in agreement with the view of Ray (2024) who opined that Business Educators rarely utilize artificial intelligence for their studies due to a lot factors and these ranges from non-availability of Ai facilities, lack of interest on the utilization of Ai tools, unconducive environment for utilizing Ai facilities and poor knowledge of Ai tools needed for teaching accounting in the 21st century.

In agreement with the view of Ray, Mohammed (2024) opined that there is a strong relationship between artificial intelligence and the acquisition of knowledge by students but most facilitators do not utilize it especially sage 50Cloud due to their poor knowledge of utilizing it to teach financial reporting, internal control, efficient book-keeping and financial management to students.

Extent of Utilization of QuickBook AI for Teaching Cost Accounting in State-Owned Universities In South-South

The findings in table two indicates that all the mean responses are at low extent, this implies that QuickBook AI is not utilized for teaching cost account in state-owned universities of south-south to enable students learn the following; charts of account, track account payable and receivable, preparation of customized invoice, and how to prepare payroll.

This finding is in agreement with the view of Onyeka (2020) who opined that most accounting lecturers do not utilize account artificial intelligence like QuickBook to teach students charts of account, how to track account payable and receivable, preparation of customized invoice and how to prepare payroll as a would-be professional accountants. This goes a long way in affecting their ability to function effectively in digitalized

where

In agreement with the view of Onyeka, Connell (2021) opined that the use of AI in teaching accounting limits manual accounting calculations and so on. It also enhances their ability to function effectively in the world of work maximally.

CONCLUSION

Based on the findings in the study, the following conclusions were made; Sage 50cloud AI, QuickBook AI were not utilized for teaching accounting courses in state-owned universities in south-south, Nigeria.

RECOMMENDATIONS

The following recommendations were made by the researcher,

1. Sage 50cloud AI should be utilized in teaching accounting courses.
2. QuickBook AI and Enterprise Resource Planning (ERP) AI should be utilized in teaching accounting courses.

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