

# Utilization of Computer Software in Posting Transactions to Ledger Accounts in the Teaching of Financial Accounting in Tertiary Institutions in the North-East Nigeria

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## Abstract

The study determined the extent of utilization of computer software in posting transactions to ledger accounts in teaching financial accounting in tertiary institutions in the North-East, Nigeria. The survey method was used for the study and the instrument for data collection was Computer Software Utilization Questionnaire (CSUQ). The Cronbach Alpha Coefficient was used to determine the level of reliability of the instrument, with the test yielding reliability coefficient of 0.99. The tools for analysis of data were the mean and standard deviation (S.D.) for the research question and ANOVA for testing the hypothesis. It was found that the accounting lecturers utilized computer software in posting transactions to ledger accounts, to a moderate extent. It was recommended that the proprietors of the institutions should provide appropriate facilities in the institutions and the lecturers should endeavour to improve their software utilization skills, among others.

**Keywords:** utilization, computer software, posting transactions, ledger accounts, teaching, and financial accounting.

## 1. Introduction

An accounting system includes a separate record for each item that appears in the balance sheet. As an example, a separate record is kept for the asset cash, showing all increases and decreases in cash resulting from the many transactions in which cash is received or paid. A similar record is kept for every other asset, liability, and for the owner's equity. The record used to keep track of the increases and decreases in a single balance sheet item is termed a ledger account, or simply an account. The entire group of accounts is kept together in an accounting record called a ledger.

In manual accounting systems, each ledger account is kept on a separate paper of columnar page. The pages are kept in a loose-leaf binder (or in a tray), which serves as the ledger. In computer-based systems, however, the ledger accounts are maintained on a disc. On the use of ledger accounts, Meigs, Bethner, Whittington and Lam (1999) observed that a ledger account is a means of accumulating, in one place, all information about changes in a specific asset, a liability or the owner's equity. As an example, a ledger account for the asset cash provides a record of the amount of cash receipts, cash payments, and the current cash balance. By maintaining a cash account, management can keep track of the amount of cash available for meeting payrolls and for making current purchases of assets and meeting service payments. This record of cash is also useful for planning future operations and in advance planning of applications for bank loans.

In its simplest form, an account has only three elements which are: (1) a title, consisting of the name of the particular asset, liability or owner's equity; (2) a left side, called the debit side; and (3) a right side, which is called the credit side. The format of account which is illustrated below is called a "T" account' because of its resemblance to the letter T.

<u>Dr.</u>	<u>Title of Account</u>	<u>Cr.</u>
Left or Debit side		Right or Credit side

A "T" account- a ledger account in its simplest form

According to Meigs, et al (1999), an amount recorded on the left or debit side of an account is called a debit, or a debit entry; an amount entered on the right or credit side is called a credit or credit entry. Also, accountants use the words debit and credit as verbs. The act of recording a debit in an account is called 'debiting' the account while the recording of a credit in an account is termed 'crediting' the account. The authors observed that students beginning a course in accounting often have erroneous notions about the meanings of debit and credit, and may view credits as more desirable than debits. Such connotations have no validity in the field of accounting. Accountants use debit to mean an entry on the left hand-side of an account while credit means an entry on the right hand-side of an account. Thus, debit and credit simply mean left and right, without any hidden or subtle implications.

The arguments above, on the ledger, are supported by Wood and Sangster (2002) as they observed that entries are made in the books of original entry, and these entries are then summarized and the summary information is entered, using double-entry, to accounts kept in the various ledgers of the business. One reason why a set of ledgers is used rather than just one big ledger is that doing so makes it easier to divide the work of recording all the entries between different bookkeepers. The different types of ledgers most businesses use are:

- Sales ledger, used for customers' personal accounts.
- Purchases ledger, used for suppliers' personal accounts.
- General ledger, contains the remaining double entry accounts, such as those related to expenses, fixed assets and capital.

Also, on the ledger and double-entry bookkeeping, Garbutt (1976) observed that the books utilized for bookkeeping fall naturally into two divisions as follows:

- \* (a) Principal Books, namely ledger and cashbook. These he opined, are the main books and those in which the double entry system of accounts is kept. The cashbook contains the cash and bank accounts while all other accounts are in the ledger.
- (b).Subsidiary books, or books of first or original entry, such as journal, purchases book, sales book, etc. Many details are recorded in these books, before the amounts concerned are entered in the ledger accounts. The author observed that the journal was the only subsidiary book at first, and the others were split from it later.
- \* Statistical or Memorandum Books: These are books in which are entered the numerous details connected with the business operations which cannot conveniently be recorded in the other books. Examples of these are the policy registers of an insurance company, the cost books and stock books, etc, of a manufacturing firm. They are similar in purpose to Subsidiary books, except that items are not posted from them to the ledger.

The author opined further that, with the cashbook, the ledger is a principal book of account and that the two contain all the accounts of a business and are kept on the double entry system. All transactions affect two accounts, one is debited (receives value) and the other is credited (gives value)

Regarding the use of computer software in posting transactions to the ledger, Alwani (2010) opined that, in an accounting data processing system, a computer can automatically carryout steps such as ledger postings and financial statement preparation using appropriate softwares. The cash register, he observed, may be linked to a computer that also records a decrease in inventory, and may also activate an order to a supplier, checks a credit limit, updates the accounts receivable and prepares monthly statements. The personnel to handle the computer processing need to be adequately trained for efficiency in operations. Similarly, Meigs, et al (1999) observed that in posting transactions to the ledger accounts, posting merely copies existing information from one accounting record to another, a function that can be easily performed by the computer with the relevant software. In a computer-based system, data posted to the ledger accounts come directly from the database, rather than from the journal. Computer software utilization eliminates most of the "paper work" involved in the operation of an accounting system, but the software's do not eliminate the need for accounting personnel who can analyze business transactions and explain these events in conformity with generally accepted accounting principles (GAAP).

Many businesses now make good use of accounting packages which are readily available and have been well tested. Such packages are commonly modularized with, typically, the sales ledger, purchases ledger, general ledger, stock control, sales invoicing, sales order processing, purchases order processing, fixed assets, pay roll, bill of materials, and job costing all being offered as separate modules in their own right. When a business decides to computerize its accounting system, it acquires only those modules it needs, rather than a complete range of modules (Wood and Sangster, 2002). However, as accounting educators, especially financial accounting lecturers with responsibility for preparing accounting graduates who could work in any company or establishment, there is the need to have adequate knowledge of the various packages and be able to utilize them to teach the students-appropriately.

It is worth noting, however, that some computerized accounting packages will post various amounts into suspense accounts when it is unclear as to where postings are to be made. These require manual intervention and journal entries to remove the items from the suspense account and complete the original entry. Also, the computer will not overcome some errors and omissions such as the operator misreading an amount on an invoice or crediting a payment to a wrong customer's account. Anyone handling any of these accounting packages, including the financial accounting lecturers will require a full knowledge of the relevant part of the accounting system as well as bookkeeping and accounting principles to effectively correct such errors. In line with this understanding, Agomuo (2005) observed that large companies faced with hundreds or thousands of transactions every week or every day must have a more efficient and economical way of recording transactions in the journal and posting to the ledger than the manual method. The easiest and most usual way to do this he stated, is to group the company's typical transactions into common categories and use an input device called a 'special

purpose journal', for each category. Most business transactions, usually 90 to 95 percent; fall in to one of four categories as shown below:

**Table 1: Categories of Business Transactions**

Transactions	Special-Purpose	Journal Posting
Sales of Merchandise on credit	Sales journal	Sales purchase on
Credit	Purchases journal	Purchases Receipt of
Cash	Cash receipt journal	CR Disbursemt of
Cash	Cash payment journal	CP

**Source: Agomuo(2005)**

The General Journal is used for recording transactions that do not fall into any of the special categories. As an example, purchases or sales returns and adjusting and closing entries are recorded in the general journal. When transactions are posted from the general journal to the ledger accounts, the posting abbreviation used is 'J'. Use of these five journals greatly reduces the amount of detailed recording work. Also, a division of labour can be gained if each journal is assigned to a different employee. This division of labour is very important in establishing good internal control (measures adopted by the management of an organization, especially within the accounts section to forestall fraudulent practices), Agomuo (2005) observed. Regarding the utilization of computer software in recording or posting transactions to the ledger, this can be done only by lecturers who have the knowledge and practical computer skills required for the exercise. Also, doing this satisfactorily results from the use of appropriate computer packages and softwares, including ledger packages, presentation aids, teaching tool, homework templates, Drill and Review, and class maintenance (Davis in Agomuo, 2005). Currently some of the financial accounting lecturers in the tertiary institutions cannot be safely said to have adequate knowledge and expertise, to do this satisfactorily.

At the end of an accounting period, the accounts in the nominal ledger must be balanced off. This is a means of finding out how much has been expended and received in respect of all the deferent categories of revenue and expenditure that are presented by the nominal ledger accounts. The balance of each ledger has to be ascertained, and this serves as a way of checking the accuracy of the double-entry postings and forms basis for the preparation of the trial balance and financial statements. An example is the account below.

**Bank**

2005		2005	₦
Nov. 1 Balance brought down (b/d)	2600	Nov.3 Purchases	1800
Nov. 15 Sales	3000	Nov. 14 Rent	1000
Nov. 30 Debtors	5500	Nov. 30 Creditors	3200
		Nov. 30 Balance carried down (c/d)	5100
	<b>₦11,100</b>		<b>₦ 11,100</b>
Dec. 1 Balance brought down (b/d)	5100		

The author observed that the first stage in the balancing procedure is to calculate totals on each side of the account to determine the side with the larger total. The second stage is to insert the difference (as balance carried down) on the side with the smaller total to enable both totals to be equal and the third stage is to record the difference below the underlined larger total (as balance brought down). This balance b/d is the beginning amount for entries for the succeeding month.

Regarding utilization of computer software in ledger balancing, there is no doubt that this will be a key feature of the 'ledger packages for a computer-based account system and as usual, to be able to utilize the computer software to operate satisfactorily, the personnel managing the various types of ledgers should be effectively trained to identify and appropriately use them. Also, involving the computer software in this stage of financial accounting education requires appropriate proficiency of the financial accounting lecturers. Some of the lecturers may not satisfactorily have the skills.

**2. Methodology of the Study**

The purpose of the study was to determine the extent of utilization of computer software in posting transactions to ledger accounts in the teaching of financial accounting in tertiary institutions in the North-East, Nigeria. The research question was "To what extent is computer software utilized in posting transactions to the ledger in the teaching of financial accounting?"

The hypothesis of the study was "There is no significant difference in the mean responses of accounting lecturers on the extent to which computer software is utilized in posting transactions to the ledger in the teaching of financial accounting.

The study was a descriptive survey which sought opinions of the respondents on the topic of the study and the instrument used in data collection was the Computer Software Utilization Questionnaire (CSUQ). Data was analysed using the mean and standard deviation (SD) for the research question while ANOVA was used to test the null hypothesis at 0.05 level of probability.

### 3. Data Presentation and Analysis

In order to answer the research question, ledger accounts were presented to the respondents and their responses were analyzed as presented in the Table below.

**Table 2**

**Mean Responses and Standard Deviation of Accounting Lecturers on Extent of Utilization of Computer Software in Posting Transactions to Ledger Accounts**

Items	$\bar{X}$	SD	Remarks
Capital Account	2.64	.68	Moderate Extent
Debtors' Account	2.54	.79	Moderate Extent
Creditors' Account	2.53	.86	Moderate Extent
Sales Account	2.62	.99	Moderate Extent
Returns Inwards Account	2.51	.79	Moderate Extent
Purchases Account	2.52	.80	Moderate Extent
Returns Outwards Account	2.44	.92	Low Extent
Cash Account	2.64	.90	Moderate Extent
Bank Account	2.66	.90	Moderate Extent
Land and Buildings Account	2.54	.83	Moderate Extent
Machinery Account	2.51	.73	Moderate Extent
Stock Account	2.50	.90	Moderate Extent
Goodwill Account	2.45	.96	Low Extent
Rent Account	2.45	.83	Low Extent
Depreciation Account	2.48	.74	Low Extent
Expenses Account	2.48	.86	Low Extent
Wages and Salaries Account	2.59	.73	Moderate Extent
Plant Account	2.51	.90	Moderate Extent
Reserves Account	2.50	.77	Moderate Extent
Provisions Account	2.46	.86	Moderate Extent
Trading Account	2.54	.80	Moderate Extent
Profit and Loss Account	2.52	.82	Moderate Extent
Fixtures and Fittings Account	2.46	.95	Low Extent
<b>Grand Mean</b>	<b>2.53</b>	<b>.73</b>	<b>Moderate Extent</b>

The results presented in the Table above indicated that item 15 had the highest mean of 2.66 which implied that computer software was utilized in posting transactions to bank account, to a moderate extent, in the teaching of financial accounting. Item 13, however, had the lowest mean of 2.44 which implied that computer software was utilized in posting transactions to returns outwards account, to a low extent. However, with a grand mean of 2.53, it implied that computer software was utilized, to a moderate extent, in posting transactions to ledger accounts.

**Ho** There is no significant difference in the mean responses of accounting lecturers on the extent to which computer software is utilized in posting transactions to the ledger in the teaching of financial accounting. Data relevant to the hypothesis were summarized in the Table below.

**Table 3**  
**Summary of Analysis of Variance (ANOVA) on the Mean Responses of Accounting Lecturers on Extent of Utilization of Computer Software in Posting Transactions to Ledger Accounts**

Sources of Variance	Sum of squares	DF	Mean Square	F-Cal	F-tab	Level of sign	Decision
Between Groups	34.59887	3	11.53291	7.028917	2.26	0.05	Reject
Within Groups	432.5163	276	1.567174				
Total	467.1165	279					

The analysis of Variance (ANOVA) presented in the Table above showed that F-calculated (F-cal) value of 7.028917 was greater than the f-critical (f-tab) of 2.26, at 0.05 level of significance. This indicated that there was significant difference in the mean responses of the accounting lecturers on the extent to which computer software was utilized in posting transactions to ledger accounts. The null hypothesis of no significant difference for the hypothesis is therefore, rejected.

#### **Finding of the Study**

Based on the data analysed, it was found that the accounting lecturers utilized computer software in posting transactions to ledger accounts, to a moderate extent.

#### **Discussion**

The study found that the accounting lecturers indicated, to a moderate extent, on the extent of utilization of computer software in posting transactions to the following ledger accounts: debtors' account, creditors' account, sales account, returns inwards account, purchases account, cash account, bank account, land and buildings account, machinery account, stock account, wages and salaries account, plant account, reserves account, trading account and profit and loss account. The unenviable extent of utilization of computer software in posting transactions to ledger accounts can be ascribed to the view held by Benjie (2006) who stated that the slow implementation of USE IT (a policy encouraging all lecturers of higher institutions to use IT) has been blamed on a lack of clear enforcement of policies by the relevant authorities. Also, it was found from the test of the hypothesis that there was significant difference in the opinions of the accounting lecturers on the 23 items. The null hypothesis was, therefore, rejected. Majority of the items were rated to a moderate extent on utilization of computer software while a few were rated low extent on the utilization of computer software in the postings. The findings are in consonance with the views of Smith, Henage and Johnson (2006) who stated that almost, in any pedagogical tool introduced, there is inertia against change.

#### **Conclusion**

It was concluded that accounting lecturers in tertiary institutions utilized computer software, to a moderate extent, in posting transactions to ledger accounts. The extent of utilization of computer software in the teaching of this stage of financial accounting, found from the study, needs improvement for beneficial tertiary accounting education. This is because graduates of the institutions would compete globally in the fields of accounting and related business occupations.

#### **Recommendations**

Measures that will ensure improvement on extent of utilization of computer software in the teaching of financial accounting in the institutions should be adopted.

The lecturers should put aside inertia and embrace modernity in their accounting delivery by acquiring adequate computer skills necessary for their job.

The appropriate regulatory authorities should monitor effective implementation of their policies, especially on utilization of computer software in the teaching and learning process.

The federal and state ministries of education and other proprietors of these institutions should ensure adequate funding to enable provision of computer facilities and effective training of the lecturers.

Institutional alumnus should also come to the aid of their institutions by providing computer facilities for the benefits of current and future students of the institutions.

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