

IMPACT OF ELECTRONIC DATA PROCESSING (EDP) ON AUDITING IN SCHOOL MANAGEMENT

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Abstract

The study is concerned with the impact of electronic data processing on auditing in school management. Three research questions were raised to guide the study. A questionnaire 'Impact of EDP on school auditing' (IEDPSA) was used to collect data from 83 school auditors and 47 school administrators who were randomly selected from 5 states in the Federal Republic of Nigeria. The result of the analysed data shows that the EDP is well favoured by both the auditors and school administrators but faced with problems of lack of skills by both the school administrators and the auditors who have stayed too long with the manual auditing methods. The facilities to operate the EDP are not easily available and affordable. The maintenance culture is also poor and power supply is epileptic. The benefit of the EDP on school auditing include: fraud control, it holds large data, accurate filing of data, good internal control of data, no alternation of data, data are easily retrievable, data are accessible, data can be saved electronically and it is in compliance with modern technology. Electronic data processing should be embraced by all school administrators to ensure a free flow of information and efficient communication on relevant data which are necessary for the day to day running of a school.

Keywords: Electronic Data Processing, Auditing, School Management

Introduction

In Nigeria today, as in other parts of the world, the computerization of accounting and business systems in the school is fast becoming the rule rather than the exception. The use of the computer in the day to day administration of the school system cannot be ignored. The computer has immense power to process and store data at a very magnificent speed expressed in micro seconds. The speed of processing and retrieving data will enable much work to be performed within a short time. Apart from input from programming errors, the computer will not make mistakes likened to human errors thereby increasing the reliability of the system.

Boni (2003) stated that the use of computers in school administration has its own drawbacks. Its potential as a vehicle of manipulation and abuse is also immense. There is the problem of administrative and physical security of the system. Environmental factors such as dust, magnetism, and heat will affect the system and the files. There could be input or programming errors, the computer will usually not be able to effect necessary corrections, hence the computer jargon "Garbage in Garbage out" (GIGO), Braide (2008) noted that the use of computers does radically alter.

- The way in which school accounting data is recorded.
- The way in which such recording must be controlled and authenticated.
- The training needs and attitude of the staff responsible at both management and technical levels.
- The way in which the process and its results must be audited.

- Changes that occur in the environment of the auditor and in the data processing systems when a computer is used.
- Opportunities that the computer affords for performing auditing tasks more effectively and efficiency.

School auditors will be concerned about computer systems because developments in the field have enabled increased operating performance at reduced costs. The Electronic Data Processing (EDP) is primarily concerned with the use of computers in basic administrative and accounting functions. It could be applied to complex management control system such as planning forecasting, and production scheduling. Enejulu (2006) also posited that more data are maintained in machine readable file such as magnetic tapes and disks, which eliminate or reduce the need for certain historical records. It is evident that the computer will review (edit) transactions instead of the manual review system. Edit routines are checks intended to determine through program checks, the validity, and completeness of input transaction and reasonableness of transactions as they flow through the system.

Processing change is also made possible by the integration of accounting and operating data in the machine readable files. The purpose of this according to Merrill (2006) is to remove the redundancy of data in corporate files and minimize the number of files necessary to be stored and produced. The increasing application of computers to accounting and school administration generally result in a number of changes in the data processing system. Many of the attributes of an EDP system affect the auditors and their work. The changed audit trail and computers speed, accuracy, reliability,

vulnerability, and editing abilities require the auditors to examine the traditional auditing procedures and adopt procedures that are most appropriate, efficient and effective for electronic data processing systems. Braide (2008) advised that an understanding of electronic data processing of the terms and concepts in use and of the types of control in electronic system is important for the auditors' evaluation of the system of internal control and of the use of the computer in auditing.

Auditing is very essential in school management. External auditing is one of the means of ensuring that the school managers account for their stewardship to the stakeholders. Auditing quality control is important for all types of audit but is of more significance in relation to the audit by computers systems because of their complex and volatile nature. Boni (2003) stated that an understanding of the effects of computerized auditing system in school management on external auditing will clearly expose the auditors approach to the problems facing auditing in school management using the electronic data processing.

The auditors primary objective is to determine that accounts are prepared in accordance with current best accounting practices and in compliance with the system of internal control and hence the goal of quality assurance remains unaltered. Emejulu (2006) stated that the school auditors are saddled with the responsibilities of:

- Investigating the record system in the school auditing procedure.
- Evaluating the controls in auditing.
- Determining how to test the auditing system.
- Determining the depth of testing to be executed in the school auditing system.
- Performing the auditing test.
- Evaluating the results of the test auditing and take corrective action.
- Issuing a report expressing opinion on whether the auditing is accurate or not.

Before the advent of modern technologies, Adesina (2001) stated that the school accounting systems were handled manually. Narrievala (2003) and Reneau (2007) itemized the major differences between the manual and computerized accounting system.

- The complexity of computer systems: Auditors can usually fully understand a manual system within a short time. A computerized system cannot usually be fully comprehended without expert knowledge and a great deal of time.
- The natural checks on fraud and error provided by separation of functions in the manual system does not apply in a computer environment.
- Lack of visible evidence: Data is stored in the computer system primarily on magnetic discs. The information contained in the records are not easily examined.
- Much data on computer are retained for a short period only, while manual records are usually retained for years.

- Computer systems can have a programmed or automatic controls. For example, the checking of a computer program that has a stock code is correct by the use of check digit verification. Its operation is difficult to check by the auditors.
- As a consequence of the computer program operating automatically without personnel being aware of what the program is doing, any program with an error in it is likely to process erroneously for ever.
- Clients may use an outside agency or a computer bureau to maintain their accounting records. This is a source of considerable problem for the auditor.

Electronic data processing has revolutionized the data processing function and its impact on school management has been tremendous over the years. The audit trail in the EDP shows that data from a document arrived in some summary figure in a general ledger account balance, but between the data on a document and the final information which is printed out, the accounting steps have processed or stored in or on a material that is not visible to human eye. Most systems provide for erasing from tapes or discs after a relatively short period thereby making it difficult for auditors to utilize reference folios and recorded entries to trace end products through computer tapes and discs to source documents.

According to the auditing guideline (2003) the auditor needs to understand the concepts and terminologies of data processing and control in order to be able to communicate with the EDP personnel. The auditor must interact with financial management and accounting personnels who share the same language with him. In an EDP system, the auditor must interact with EDP management and computer technicians. The high speed of the computer allows the auditors to process and reprocess a complete file of transactions in less time than it would take to test a very small sample manually. As a result of the integration of accounting and operating data in machine readable files and integrated database, the auditor may now be able to execute accounting procedure.

In school auditing, the school administrator must organize the school in such a way that it is auditable. An auditable system is one in which it is clear who has done what, when the transactions originated, and their destinations. This however only ensures that data can be audited and it is also important to audit what the school does, that is the programming steps. The days of manual school accounting procedures are expected to be obsolete, the use of the electronic data processing is expected to be embraced in all schools but several issues are involved.

Statement of Problem

In modern day technology, the use of computers is well favoured either for the storage or retrieval of information. In school auditing, the manual method has been the usual practice as

inherited from the colonial masters. With the wind of change, modern technology has replaced the manual method. The problem of adopting and accepting the new change becomes worrisome. Most school administrators are not computer literate, the auditors have overstayed with the manual method and the effectiveness of the EDP is still in doubt.

Objective

The primary objective of this study is to find out the impact of electronic data processing (EDP) on auditing to school management. The study answers the following questions.

1. What are the problems facing electronic data processing in schools?
2. What is the perception of school auditors on the efficiency of EDP and manual auditing?
3. Will EDP enhance effectiveness in school auditing?

Methodology

The survey design method was adopted in the study. The population of the study comprised all the secondary schools in Kogi, Edo, Niger, Anambra and Oyo states.

Using the stratified random sampling method, 83 school auditors and 47 school administrators were selected for the study from five states: Kogi, Edo, Niger, Anambra and Oyo. The instrument “Impact of Electronic Data Processing on

School Auditing (IEDPSA)” was designed by the researcher. The instrument consisted of two sections. Section A sought demographic data of respondents and section B consisted of 20 item questions. The items sought information on the impact of EDP on school auditing. Experts in school accounting of the Niger Delta University, Wilberforce Island, Bayelsa State ascertained the face and content validity of the instrument. The instrument was further subjected to a pilot test in order to ascertain its reliability. The instrument was administered to ten respondents who would not take part in the main study but display the same characteristics of the respondents in the main study.

The data collected from the pilot test were analyzed using the split-half reliability Pearson Product Moment Correlation Coefficient. The computed result is 0.81 and the instrument is therefore considered reliable. The instrument was personally administered by the researcher and other research assistants, and the questionnaires were collected on the spot, hence the 100% rate of return. The data was analyzed using the percentage and t-test statistical methods.

Result

Research question 1: What are the problems facing electronic data processing in schools?

Items 1-5 of the questionnaire answered the research question. N=130

Table 1: Problems facing EDP in school.

Problems	Adequate	Not adequate
1. Skill	20 (15.4)	110 (84.6%)
2. Manpower	30 (23.17)	100 (76.9)
3. Facilities	32 (24.7)	98 (75.3)
4. Electricity	24 (18.5)	106 (81.5)
5. Interest in EDP	108 (83.1)	22 (16.9)
6. Availability	26 (20.0)	104 (80.0)
7. Maintenance	24 (18.5)	106 (81.5)
8. Cost	30 (23.1)	100 (76.9)
9. Controls	31 (16.2)	109 (83.8)
10. Training and retraining	23 (17.7)	107 (82.3)

Table 1 shows that 83.1% of the total respondents made up of 83 school auditors and 42 school administrators have agreed that there is adequate interest for EDP all the remaining items are problems are problem facing EDP in schools. They include: facilities, epileptic power supply, unavailability of equipments, poor maintenance culture, high cost, low controls and lack of training and retraining of staff, among others.

Research Question 2

Is there any significant difference in the perception of auditors on EDP and manual auditing.

This research question was tested using the responses of items 6-10 in the questionnaire.

Table 2: t-test analysis of the perception of auditors on EDP and manual auditing.

Variables	N	\bar{X}	SD	df	t cal	t-crit	Remark
EDP	83	18.7	9.2	123	2.36	1.96	Reject Ho
Manual auditing	42	14.2	11.0				

The computed t-value of 2.36 is greater than the critical t-value of 1.96. It holds therefore that there is

a significant difference in the perception of auditors on the impact of electronic data processing and

manual auditing it holds therefore that the auditors prefer EDP to the manual auditing.

This research question was answered with items 11-15 on the questionnaire.

Research question 3: Will EDP enhance effectiveness in school auditing?

Table 3: Effectiveness of EDP on school auditing.

Items	Effective	Not effective
1. Controls fraud	102 (78.5)	28 (2.15)
2. Holds large data	104 (80.0)	26 (20.0)
3. Accurate telling of data	108 (83.1)	22 (16.9)
4. Enhance internal control	99 (76.2)	31 (3.8)
5. No alternation of figures	100 (76.9)	30 (23.1)
6. Easily retrievable	101 (77.7)	29 (22.3)
7. Easy accessibility	103 (79.2)	27 (20.8)
8. Subjectable for moderation	114 (87.7)	16 (12.8)
9. Data can be saved electronically	110 (84.6)	20 (15.4)
10. Compliant to modernity	104 (80.0)	26 (20.0)

Table 3 shows the effectiveness of the electronic data processing as perceived by auditors and school administrators. The respondents have agreed that the EDP is effective in fraud control, it holds large data, it enables efficient filing of data, it enhances internal control, it disallows alternation of figures, it makes data to be easily retrievable, it is easily accessible, it is easily subjectable to several moderations, data can be stored electronically and it is in compliance with the modern technology.

Findings

The following findings were made:

- The problems facing the use of the EDP in schools include:
 - Lack of skills
 - Insufficient manpower
 - Inadequate facilities
 - Epileptic power supply
 - Innability of material resources
 - Lack of maintenance
 - High cost of purchase
 - Lack of internal control skills
 - Training and retraining of staff
- The importance of the EDP to school management are:
 - It controls fraud
 - Holds large data
 - easy reconciliation
 - Accurate filing of data
 - Good internal control of data
 - No alteration of figures
 - Easily retrievable
 - Easy accessibility
 - Subject to moderations
 - Data can be saved electronically
 - Compliant with modern technology

Discussion

The electronic data processing is relatively new in secondary school administration. Over time the manual methods of recording all school data had been in use. With the birth of modern technology, the

EDP has become necessary. In studying, the impact of the EDP on auditing in school management several problems were identified as also highlighted in the studies of Reneau (2007) and Narrievala (2003). Reneau (2007) highlighted the problems of manpower while narrievalau (2013) stated the problems associated with electronic devices. The problems include the lack of skill by school administrators and even most accounting staff to operate the EDP. The manpower to handle the systems are insufficient and not trained (Reneau (2007). The facilities which are majorly computers and the electricity to power them are not readily available in most schools especially the rural schools. The cost of purchasing EDP systems as well as the maintenance cannot be easily handled by most school administrators. The several controls to be adopted to ensure that data are not tampered with require skilled training which is not readily available to staff (Narrievala (2003).

However, the school auditors agreed that there is a significant difference in the efficiency manual auditing and the electronic data processing systems. The Institute of chartered Accountants ICA (2003) holds that the place of electronic data processing must not be ignored in modern auditing. The study highlighted some of the benefits of the EDP in school management as agreed by the America Institute of Certified Public Accountants (2004) which reported that EDP aids efficiency and effectiveness. The school administrators and auditors agreed that the EDP is one of the surest way of checking fraud in the school system. Large data can be treated with ease, the data can be filed for easy retrieval, internal control of data can be enhanced, alternation of figures is near impossible, the data can be easily retrieved, the data stored can be accessed easily, it can be subjected to series of moderations, the data can be saved electronically, and it is in compliance with the modern technology.

Conclusion

Based on the findings of the study, it can be concluded that EDP is essential in school management but it is faced with numerous problem. Most auditors even prefer the EDP to the manual auditing but most account staff are not adequately equipped to handle the EDP. The school management as well as the ministries of education has a great role to play in this regard.

Recommendations

Based on the findings, the following recommendations are made:

1. Electronic data processing should be embraced by all school administrators.
2. Teachers and other account staff should be trained in handling the EDP systems.

3. Power supply to schools should be improved upon by the government and school administrators should also be resourceful.
4. The school administrator should through the PTA and other school business practices source for fund to purchase some of the needed computers.
5. Staff should be trained on maintenance culture.
6. There should be security as regards accessibility into the system.
7. There should always be a back up of the data stored either in magnetic tapes or flash drives.
8. There should be acceptable template and all accounts staff should made to receive in-depth training in both computer and EDP

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