

STRATEGIES FOR INTEGRATING ICT IN THE TEACHING AND LEARNING OF ACCOUNTING IN TERTIARY INSTITUTIONS IN NIGERIA

Ngozi Benedette Nwali

*Department of Business Education,
Ebonyi State College of Education,
Ikwo.*

And

Nonye Azih,(Ph.D)

*Faculty of Education,
Ebonyi State University,
Abakaliki.*

Abstract

Information and communication technology (ICT) has long been heralded as a crucial element of accounting. This paper takes a look at the strategies for integrating ICT in the teaching and learning of accounting in tertiary institutions. This is to ensure that the graduates have the knowledge and skills to use the new digital tools and resources to achieve high academic standards. The paper discussed meaning of accounting, the constraints to effective teaching and learning of accounting, areas of ICT to be emphasized in accounting, as well as roles of ICT in the teaching and learning of accounting. The researcher suggested that the funding of educational programme, adequate maintenance culture, training and retraining programme for accounting educators, availability and utilization of planned instructional packages are strategies to be used in integrating ICT in teaching and learning of accounting in Nigerian tertiary institutions.

Accounting is the process of communicating financial information about a business entity to users such as shareholders and managers. The communication is generally in the form of financial statements that show in money terms the economic resources under the control of management, the art lies in selecting the information that is relevant to the use and is reliable (Onwamechi, 2004). The American institute of certified public accountants (AICPA) defines accounting as “the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are in part at least of financial character and interpreting the results there of”. The principles of accounting are applied to business

entities in three divisions of practical art, namely accounting, bookkeeping and auditing.

Igboke (2002) defines accounting as the collecting, recording, summarizing, analyzing and reporting in monetary terms information about a business organization. Ama (1999) defines accounting as a set of theories, concepts (or ideas) and techniques by which financial data are processed into meaningful information for reporting, planning, controlling and decision making purposes or simply the process of recording, classifying, reporting and interpreting the financial data of an organization to management and other interested users. From the forgoing accounting can be seen as the collection of financial data about an organization as well as the analysis, measurement, recording and reporting of that information for decision making. Accounting concentrates on reporting to people inside and outside the business entity which will help in arriving at useful decisions about business.

Information and communication technology has aroused more curiosity than ever before in teaching and learning. The utilization of ICT as instructional materials has provided students with knowledge and skills for operation of technology in both business offices and schools.

ICT is an umbrella term that includes any communication device or application, which includes radio, television, cellular phones, computer and network hardware and software, satellite systems etc, as well as the various services and applications associated with them, such as video conferencing and distance learning. Osuala (2004) asserted that ICT deals with handling and processing of information using all kinds of electronic devices. These electronic devices are used in various organizations to enhance effective communication and other office routine functions.

In order to attain ICT skills, the federal government incorporated computer education at all levels of our educational system as one of the basic subjects to be offered at all levels. This mandatory introduction of ICT elements into school syllabus throughout Nigeria has been widely unchallenged as Borthick and Clark (1987) argued that as computing permeates organization, the success of accounting graduates at all levels will increasingly depend on their ability to use computing to accomplish organizational objective. It is a known fact that some of the accounting graduates do not have basic skills of ICT technology. Moreover, some of the graduates find it difficult to prepare some accounting transactions. This can be attributed to certain constraints.

Constraints to Effective Teaching and Learning of Accounting

The following are the constraints affecting the teaching and learning of accounting:

i. Shortage of Qualified Accounts Lecturers

There are shortage of qualified accounts lecturers in tertiary institutions. Some accounts lecturers prefer industries to teaching, thereby escalating the shortage of qualified personnel in teaching field. In the absence of accounts lecturers, people from other disciplines come into the field to teach accounting courses without imparting the right knowledge on the students. The result is that they graduate people that cannot teach the subject effectively.

ii. Improper Teaching Method

The primary education goal for teaching accounting in schools is to expose students to both practical and theoretical knowledge. Unfortunately, students are not properly taught both theory and practical areas of accounting. Azih (2008) has identified the factors causing this problem to include the lack of adequate instructional materials and/or poor effective teaching method. The expository approach which is the dominant method of teaching employed by accounting teachers is employed most of the time through giving of verbal explanations in the form of talk-and-chalk while the students listen and write notes from the chalk board. Such inadequate and limited teaching method tends to negatively affect learning.

iii. Inadequate Funding

Funding is a major constraint in our educational programme. Adequate financing of programmes are important to ensure that the necessary teaching facilities are provided. Book keeping and accounts have over the years witnessed inadequate funding, this has affected the effective teaching and learning of the subject hence the need to improve on the teaching and learning method.

iv. Inadequate Textbooks, Workbooks and other Business Teaching Materials

Asaolu (2002) stated that another problem inhibiting the development of accounting in Nigeria is inadequate textbooks, workbooks and other teaching aids. Textbooks and workbooks authored by Nigerians are scanty in the market in areas such as accounting, marketing etc. Books on information technology containing basic accounting skills are scarce in the market. Therefore graduate of accounting who are taught without these facilities cannot in any way be able to teach this aspect of the subject.

v. Poor Maintenance of Equipment

The facilities provided in tertiary institutions are not properly maintained. Students classrooms, libraries, and laboratories are not usually maintained. Raymond

and Ogbunbameru (2003) observed that there is no maintenance in the school system at all levels except when a major disaster occurs such as rainstorm, that the government moves in to effect repairs. The little number of computers, printers, typewriters etc provided in the institutions are not usually maintained effectively. This normally posits a constraint to effective teaching and learning of accounting.

vi. Inaccessibility of Accounts Lecturers/Students to Digital Technology and Internet

Accounts teachers and students suffer because of non availability of digital technology and internet in their classroom. Students are supposed to be taught the use of digital technology and internet. It is unfortunate that even some of the accounts teachers themselves can neither make use of these facilities nor teach them. Ekwue (1993) found out that some of the accounting teachers have not got a high degree of skills because they have not been formally trained in the technique of teaching accounting. It is important that accounting graduates are trained to be conversant with modern accounting skills. Accounting teachers must have the knowledge and skills to use the new digital tools and resources to help all students achieve high academic standards.

Areas of ICT to be Emphasized in Accounting Programme

The following areas must be emphasized:

a. Microsoft Word

This is a word processing software package that can be used to type letters, reports and other documents. It gives you the ability to use your computer for desktop publishing of information like statements of accounts.

b. Microsoft Access

This is a form of database management system (DBMS) designed by Microsoft corporation to facilitate consistency, and non-redundancy. A database is a collection of data items stored with a minimum of duplications so as to provide a consistent and controlled pool of operational data. It is simply information related to a particular subject or purpose such as tracking customer orders (Ayatalumo, Ezeano, Ezeorah, 2003).

c. PowerPoint

This is a presentation programme developed by Microsoft? It is included in the standard office suit along with Microsoft word and excel. The software allows users to create anything by using basic slide to show complex presentations. PowerPoint is often used to create business presentations but can also be used for educational or information purpose like illustrations of accounting exercises

organized in slide form. The exercises can then be projected for the students to view entries made. This facilitates the teaching and learning of accounting.

d. Internet

The internet is a global system of interconnected computer networks that use the standard internet protocol suite to serve billions of users worldwide. It is a network of networks that consists of millions of private, public, academic, business and government networks of local to global scope that are linked by a broad way of electronic, wireless and optical networking technologies. The internet carries an extensive range of information resources and services such as the inter-linked hypertext documents of the World-Wide-Web (www) and the infrastructure to support e-mail.

e. Microsoft Excel

This is one of the most versatile and popular spreadsheet programme. It serves as an electronic pad for accountants. It can easily perform simple as well as complex mathematical operations. Vikas in Nnorom (2011) stated that excel also provide the facility to convert the spreadsheet data into various charts like pie, bar etc. when converted into charts the spreadsheet data can easily be understood (Vikas, 2008).

f. Quick Book

This is an intuit set of software solution designed to manage payroll, inventory, sales and other needs of a small business. The software features include marketing tools, merchant services, products and suppliers training solutions. Each solution is developed according to different industries and their needs. Preparation of business transactions is facilitated by the use of quick book hence it is an important accounting package needed by accounting educators.

g. Sage Peach/Tree Accounting

This accounting package is accounting software on the website. Sage/peach tree gets its lowest marks for ease of set-up as it can be time consuming and confusing to initially configure. However, it has a huge number of features and includes free help and technical support. The software has a section for accounts receivable, accounts payable, payroll, inventory, billing, project costs, general ledger, fixed assets, updates and reporting. Sage Peachtree allows users to automate purchase orders and invoice customers by mail. You can also automatically check for common accounting errors.

How ICT can Improve Teaching and Learning?

ICT can enhance the quality of education in several ways: by increasing learner motivation and engagement by facilitating the acquisition of basic skills, and

by enhancing teacher training. ICTs are also transformational tools which, when used appropriately, can promote the shift to a learner-centered environment. It plays the following roles:

i. Motivation to Learn

ICTs such as videos, television and multimedia computer software that combine text, sound and colourful, moving images can be used to provide challenging and authentic accounting exercises that will engage the student in the learning process. Interactive radio likewise makes use of sound effects, songs, dramatization, comic skits, and other performance conventions to compel the students to listen and become fully involved in the lessons being delivered. More so, than any other type of ICT, networked computers with internet connectivity can increase learner motivation as it combines the media richness and interactivity of other ICTs with the opportunity to connect with real people and to participate in real world events.

ii. Facilitating the Acquisition of Basic Skills

The transmission of basic skills and concepts that are the foundation of higher order thinking skills and creativity can be facilitated by ICTs through drill and practice. Educational television programmes in accounting can be learnt using computer-based learning (also called computer-instruction) that focus on mastery of skills and content through repetition and reinforcement.

iii. Enhancing Teacher Training

ICTs have also been used to improve access to and the quality of teacher training. For example, at India Gandhi National Open University, satellite-based-one-way video-and two-way audio-conferencing was held in 1996, supplemented by print-materials and recorded video, to train 910 primary school teachers and facilitator from 20 training institutes in Kamataka State (Mohanty, 2011). Training programmes organized for accounting lecturers will improve their knowledge of modern accounting skills.

iv. Finding out Information

Students can use ICT to find out information and to gain new knowledge in several ways. They may find information on the internet or by using an ICT-based encyclopedia such as Microsoft Encarta. They may find information by extracting it from a document prepared by the teacher and made available to them via ICT, such as document created using Microsoft word or a Microsoft PowerPoint slideshow. They may find out information by communicating with people elsewhere using email, such as students in a different school or even in a different country.

Students can use ICT as part of a creative process where they have to consider more carefully the information which they have about a given subject. They may need to carry out calculation (e.g. by using Microsoft excel) or to check grammar and spelling in a piece of writing (perhaps using Microsoft word), or they need to re-sequence a series of events (for example by re-ordering a series of Microsoft PowerPoint slides).

v. Sharing Knowledge

Students can use ICT to present their work in a highly professional format. They can create documents and slideshows to demonstrate what they have learned, and then share this with other students, with their teacher, and even via email with people all around the world. Cradler and Bridgforth in Yusuf (2010) stated that on the part of students, information and communication technologies significantly improve students problem-solving skills, provide opportunities for student-constructed learning, increase mastery of vocational and workforce skills, increase the preparation of students for most careers and vocation, and improve confidence and attitude of students.

Strategies for Integrating ICT in the Teaching and Learning of Accounting

i. Funding of Education Programme

Funding of education at all levels in Nigeria should be properly addressed. The funding of our tertiary institutions should be a collective effort of both the institution, federal, state and local government. Sufficient funds should be provided to ensure that the necessary ICT facilities are provided in tertiary institutions. An ICT resource center should be established for every accounting department. This ICT resource center should contain sufficient computers and other ICT accessories for effective practical experiences in information communication technology. This resource center must be manned by a technologist who should provide guided instructions whenever the students wish to use the laboratory.

ii. Adequate Maintenance Culture

Adequate maintenance culture should be maintained by these institutions to ensure that the computers are kept in good condition for easy usage by the students. Internet facilities has to be installed in the computer laboratory to enable the students have access to accounting materials

iii. Organization of Training and Retraining Programme for Accounting Educators

This is one of the strategies to be employed in integrating ICT in the teaching of accounting. Accounting teachers should be conversant with modern accounting skills like Microsoft excel, Microsoft access, quick book, peach tree etc. Azih (2010)

equally found out in a study carried out that Microsoft access, Microsoft excel and peach tree accounting skills are required by accounting education students. Consequently, universities and other tertiary institutions offering degree and diploma programme in accounting should ensure that modern ICT accounting courses are included in their programme to ensure that qualitative accounting graduates are trained by these institutions. Stephenson and Weil (1993) observed that since lack of teachers of computer skills is the single largest barrier to ICTs use in education, initial teacher training in Nigerian schools should incorporate necessary ICT training. Retraining programme should be provided for the lecturers in accounting education to update their knowledge on the use of these ICT package in preparing accounting transactions. Workshops and seminars should be organized periodically to ensure that accounting educators keep abreast of the current accounting skills.

iv. Availability and Utilization of Planned Instructional Packages in ICT

Instructional packages in ICT should be prepared and made available for institutions offering accounting education. Such skills created from the package should be systematically organized from simple to complex skills. Development of local content software on some accounting topics should be encouraged.

v. Revision of Existing Curriculum to Accommodate More Accounting Courses

Umezulike and Ile (2008) equally observed that to train our accounting graduates to be viable; identifying opportunities around them and as well as use of information technology skills to liberate themselves from the mandate of perpetual hardship and poverty, there is need for adjustments in some educational courses and the integration of vocational and more IT courses in accounting education curriculum of instruction. It is imperative that there is a standard degree programme of accounting which should contain modern ICT skills like excel, database, quick book etc for programme relevance. The National Universities Council (NUC) and National Council for Colleges of Education (NCCE) should ensure that the standard accounting programme is a bench mark for accrediting accounting programmes. The programme of the institutions must include the ICT packages included in the standard academic programme.

vi. Students in accounting should be encouraged to buy their personal laptops for effective practicing of the acquired skills during their leisure time. Exercises involving computing of various statements of accounts using some packages like excel, peach tree, database etc can be given to the students to enhance effective teaching and learning of the accounting skills.

vii. Communities, Alumni, associations and significant others should be involved in developing ICTs policies at school level and be involved in the implementation.

Strategies for Integrating ICT in the Teaching and Learning of Accounting in Tertiary Institutions in Nigeria - Ngozi Benedette Nwali and Nonye Azih, (Ph.D)

Working with community will lead to development of a more authentic and conceptualized approach to learning (Scrimshaw, 2004) community based. ICT centres with internet facilities can equally be used by the institutions. This will help to generate some fund for the school.

viii. Continuous research on ICT skills in Nigerian institutions should be conducted regularly like in civilized countries. This will help to monitor the progress of ICT application in education. The government, non-government agencies and organizations, research institutes and association of business educators in Nigeria should conduct research periodically to monitor the progress of ICT in accounting departments of our tertiary institutions.

Conclusion

ICT has the great potential in educational management and improvement of traditional teaching. With teachers having the needed skills and knowledge, provision of sufficient equipment and other infrastructure, adequate maintenance culture and availability and utilization of planned packages in ICT; ICT can be of immense benefit to teaching and learning of accounting.

This potential can only be exploited if there is a collective effort of both the institution, education agencies, federal, state and local government towards ensuring that the strategies are properly employed to ensure effective integration of ICT in the teaching and learning of accounting.

Recommendations

All the necessary ICT equipment should be provided for effective teaching and learning.

Tertiary institutions offering degree or diploma programme in accounting education must include the necessary accounting packages in their programme.

Training and retraining programme should be organized for accounting education students to update their knowledge on the use of modern accounting packages.

References

- Ama. G.A.N. (1999). *Monograph on advanced financial accounting, school of business administration*. Abia State University, Uturu.
- Anderson, J. (2004). IT, e-learning and teacher development. *International education Journal*, 5(5), 1-14 (electronic version) retrieved April 15, 2012 from <http://iei.cib.net>
- Asaohu, A. (2002). *Modern book keeping and accounts*. Ibadan: Calabek Publishers.

Journal of Assertiveness

- Ayatalumo, C.J.C., Ezeano, N.A., Ezeano, V.N. & Ezeorah, E.U. (2003). *Computer software packages*. Owerri: Hudson-Jude.
- Azih, N. (2008). *Effects of instructional scaffolding on student's achievement and interest on financial accounting in secondary schools in Abakaliki urban*. An Unpublished Ph.D thesis submitted to the Department of Business Education Ebonyi State University, Abakaliki.
- Azih, N. (2010). Modern accounting skills required by accounting education students. *Business Education Journal*, 7(2), 120.
- Dictionary of Accounting. (2005). New York: Oxford University Press.
- Ekwue, K.C. (1993). Teaching of accounting in secondary schools. An appraisal of instructional materials. *Business Education Journal*, 11(1), 28-32.
- Igboke, S.A. (2002). *Fundamentals of financial accounting*. Enugu: Cheston Limited.
- Mohanty, R.R. (2011). *ICT advantages and disadvantages* (electronic version), retrieved April 15, 2012 from <http://ict-adv-disadv-blogspot.com/>
- Nnorom, E.O. (2009). *Competencies needed by office technology and management graduates for self employment in the era of ICT*. A seminar paper presented to the Department of Business Education, Ebonyi State University, Abakaliki.
- Onwamechi, S.O. (2004). *Introduction to Practical Book keeping and Accounts*. Enugu: Cheston Limited.
- Osuala, E.C. (2004). *Principles and methods of business and computer education*. Enugu: Cheston Agency Limited.
- Raymond, U., & Ogbunbameru, M.T. (2005). *A comparative Analysis of two methods of teaching financial accounting of secondary school*. Retrieved April 15, 2012.
- Scrimshaw, P. (2004). *Energizing teachers to make successful use of ICT*. London: BECTA (Electronic version) retrieved April 15, 2012 from <http://www.becta.org.uk>

Strategies for Integrating ICT in the Teaching and Learning of Accounting in Tertiary Institutions in Nigeria - Ngozi Benedette Nwali and Nonye Azih, (Ph.D)

- Stephenson, J., & Weil, S. (1993). *Quality in learning: A capability approach in higher education*. London: Kogan Page.
- Umezulike, A.N., & Ile, C.M. (2008). A call for reforming the contents of the four year accounting education programme in *Nigerian Association of Business Education Journal VI ((2) 76-86*.
- Yusuf, M.O. (2010). Information and communication technology and education. Analyzing the Nigerian national policy for information technology. *International education journal*, 6(3), 316-321 (electronic version) retrieved April 15, 2012 from <http://iei.cibinet>