The Applicability of Computer Technology to the Study of African History and International Studies

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Abstract

There is no doubt that the use of computer technology will lead to the generation of evidence based data that will be critical to historical methodology geared towards the development of African history. Accordingly, computer technology is capable of storing, accepting, processing and communication information that will be relevant for the historian's challenges in the study of African history. Computer aided technology will constitute an innovative approach to historical source material to the historian's calling and craft. Thus, it will enhance the multidisciplinary approach methodology to the study of African history. Today, we are living in an age, where internet connectivity of computers in the world has made the world a global village. In African history, historians should employ the computer technology to upgrade their historical research and writing. By the mid-1990's, experts estimated that more than fifty million computers were linked to the information superhighway by way of a network called the internet (Net) and by the end of the 2010, more than three hundred million computers. The internet is a computer-based worldwide information network. Thus, this is understandable because historical sources of information influence the final product and its probative value and significance in historical writing. Computer-based technologies can assist scholars in history and international studies to develop sharp historical skills and capability easily and faster by integrating various technological pedagogical features and developments. Thus, the adoption and the applicability of computer-based technology to the study of African history and international studies cannot be over-emphasized.

Keyword: Computer Technology, Applicability, African History, International Studies, Integration, Multidisciplinary approach

Introduction

Source material is a significant dimension of historical methodology that it is instructive to use it as a sine-qua-non in our assessment of the work of a historian. Thus, this is understandable because historical sources of information influence the final product as well as its probative value and significance in historical writing. Besides, one can distort historical knowledge by his selection of materials. Indeed, subjective selectivity of source materials have led some historians to commit intellectual quandary. Stanley M. Elkins, Leaning heavily on slave masters' sources of information vis-à-vis neglecting the slave's sources claims that the black man emerged from the American slave plantation system an infantilized adult, a Sambo(Stanley M. Elkins, 1964:8, 88-89). In the same manner, Kenneth Stampp asserts that most black slaves were "Clowns" (Kenneth Stampp 1953: 617). While Hugh Trevor-Roper believing that the only legitimate source of historical writing is written document, claims that to study African history before the coming of the Europeans was to "pry into unrewarding gyrations of barbarous tribes in picturesque but irrelevant corners of the globe (Quoted in O.E. Uya 1984:2). From the foregoing discussion, it is evident that the source of historical writing is a significant scope of historical methodology.

Aside from the above, African history has oral tradition as its high-powered and efficacious source for the writing of the history of segmentary societies. Writing on "Oral Tradition and the History of Segmentary Societies" A.E. Afigbo discussed the challenges he faced using oral tradition thus:

> For one reason the scratches I had recently for having ventured into the field of Efik Traditions of origin and migration in more youthful days is enough to warn me that using oral tradition could be like stepping on a steep and slippery road whose end is also invisible. Though I must confess it is not yet quite clear to me whether my crime consisted in transgressing the rules for handling oral tradition or in having the temerity to cross ethnic boundaries in the pursuit of historical knowledge (E.A. Udo, 1976:154-172).

Notwithstanding the challenges, this wide-ranging as well as laudable concern for the methodology of oral tradition has not only helped to point out the centrality of oral tradition as a source for the history of Africa particularly of Black Africa. The fact is that ever since the publication in 1961 of Professor Jan Vansina's epoch-making book, Oral

Tradition: A Study in Historical Methodology, the study of the methodology of oral tradition has become a minor academic industry amongst historians, psycho-historians as well as anthropologists.

However, the Europeans as well as the Arabs have tried to distort African history either by deliberate falsehood or by deliberate denial of the existence of African history, although Afrocentric historians are to a large extent dismantling these Islamic and European prejudices to African history, particularly since the 1960s.

In reconstructing the history of the Bakuba, using almost exclusively oral traditions, Jan Vansina made a methodological breakthrough, showing that what written document is to literate society, is what oral tradition is to non-literate society. Accordingly, this development made a tremendous impact on African historiography. The African continent, like other continents in the world, has been a stage upon which the drama of human development as well as cultural differentiation has been acted since the beginning of history. However, until recently the history of the African continent, its cultural patterns, as well as the potential of its people, has been the subject of monumental distortions, ridicule as well as amusement among the intellectual community. From the foregoing it is obvious that the most pervasive perspective on Africa until recently was the Eurocentric perspective. In other words, the accepted explanations for African developments was the "Covering Law Theory", championed by Carl Hampel as well as Karl R. Popper, otherwise referred to as "Hampel-Popper Law. Therefore, the Covering Laws in this context were Social Determinism, the White Man's Burden and so on. Infact, Africans had developed systematic ways of preserving their history, the vast majority of them did not write down their history, hence advocates of the above Eurocentric view could justifiably asserted that "Africa had in History".Although this Eurocentric approach to African history is fast becoming extinct, particularly since the 1960s when the Afrocentric historians came into the limelight. The paper is an attempt to demonstrate and reinforce the origin, functions and the applicability of the computer technology to the study of African history.

Computer: The Labyrinths of Origin

There is no doubt that the use of computer technology will lead to the generation of evidence based data that will be critical to historical methodology geared towards the development of African history. Thus, the origin of the computer, a machine indeed by design is capable to accept, store, process as well as communicate information and it is associated with man's desire to ease his challenges with numbers.

In the 16th century, it started with the mechanization process following the invention of the "Abacus" calculating devise. Thus, the 17th century as well as the industrial Age provided a lot of devices for automating mathematics. An inventive genius as well as the most prominent of these were perhaps those of Sir Charles Babbage, who is referred to as the father of the modern computer.

It was not until the 1900s that the actual electromagnetic system stated. In addition, these were colossus at Btetchley Park, England, as well as Eniac and Ferranti machine at Manchester. These early electronic or first electronic stored programme computers were designed during the 2nd World War for the United States Department of Defence for listing the dead, the wounded as well as to calculate the fall of the shells.

In the world of computers, software developers keep producing application programmes that offer more user friendly features. One such application is the Microsoft Word. This is a Word Processing application that offers a lot of easy to use facilities in document production. Such facilities are in the area of editing, spell checking, formatting, thesaurus, tables, merging, graphics etc. These processing application facilities are indeed relevant and beneficial to the African historian.

Thus, these initial machines mentioned above, were enormous and filled rooms with vacuum tubes. Note however, that time was severely limited because there were so many tubes. In the late 1940s, the transistor which was invented had the benefit of compactness, use of low voltages as well as the consumption of an infinitesimal amount of power.

Consistent enhancement and reform since then had resulted in the founding of the first "Integrated Circuit" in which a lot of transistors as well as other electronic devices in conjunction with the wiring that link them are manufactured in one piece.

Developments of this technology led to the "Silicon Chip" in which huge numbers of these devices are packed unto a sliva of silicon of only about one quarter of an inch square. In the 1950s, increased quality as well as expanded business opportunities gathered momentum and has gone through various generations in its application in business.

Note however, that in the mid-1940s, scholars like Howard Aiken at Harvard, John Von Neumann of the Institute for Advanced Studies in Princeton; J. Presper Eckert as well as John Mauchley both of the University of Pennsylvania, and Konarad Zuse of Germany were the pioneers in building calculating machines that could be classified as first generation computers (1945-1955); (Anthonius C. Akukwe, 2013:108). Historically, some of

the first generation computers were named the E.N.I.A.C (Numerical Integrator and Calculator) EDVAC (Electronic Discrete Variable Automatic Computer), the EDSAC (Electronic Delay Storage Automatic Computer) the UNIVAC (Universal Automatic Computer) (Akukwe, 2013), just to mention but a few. Obviously, the first generation computers made use of vacuum tubes, were very bulky, and generated much heat as well as created air-conditioning challenges.

Following the introduction of the transistors in the mid1950s, there was great innovation. This was the era of the second generation computers (1955-1965). The computers of this period became reliable. Also, there was a clear divide between the designers, builders, operators, programmers, (Akukwe, 2013: 109), and the maintenance experts.

The third generation computers (1965-1980) made use of small scale integrated circuits (ICs) which ushered in a major price and performance benefit over the second generation computers which were built-up from individual transistors. This era led to the emergence of compatible computers with the purpose of making all software including the operating system to work on all models as well as to be efficient for all the divergent uses(Akukwe, 2013: 109-110).

The fourth generation computers (1980 upwards) made use of large scale integration (LSI) circuits which were chips made up of thousands of transistors on a square centimeter of silicon (Akukwe, 2013: 111). This ushered the era of personal computers (PCs) and led to the reduction of price of computer systems.

The fifth generation computers are currently being designed and developed. They work using "Expert System" as well as "Artificial Intelligence". However, these computers have programmes that gave them the ability to infer, reason, solve problems, understand language, take decisions and imitate human intelligence (Akukwe, 2013: 112).

However, the first generation of computers with vacuum tubes, the current trend has moved to transistors as well as semi-conductors and from the third generation to the fourth which embraced the integrated circuit and currently, to the fifth generation which used silicon chips. Computer nowadays fall into three categories namely, Mainframes, Mini computers as well as Microcomputers.

Computerization in historical perspective in Nigeria started in the 1960s with the installation of computers by the International Business Machines (I.B.M.) as well as International Computer Ltd (I.C.L.). For teaching, learning and research, computers were

first installed at Ahmadu Bello University, Zaria, Nigeria, specifically for courses like statistics, Mathematics as well as Agriculture. Consequent upon this development the demand for computers for learning increased tremendously in all areas of human pursuit that is associated with the acquisition of knowledge.

The Role of Computer

In terms of speed, the computer can work faster than any human being when it involves calculation of large and complex numbers. It accepts, stores, processes as well as communicates information. In other words, computer deals with basically data fed into it and this is carried out in four ways namely accepting information, storing the information, processing the information, as well as communicating the information.

Also, computer can recall the information it stored when needed. If the correct programme instructions and data are properly fed into the computer, it can produce adequate result without mistakes. The computer can work for a longer hours without getting tired, that is, less fatigue. The computer is also versatile to the extent that it can carry out several tasks, such as calculation, typing stories, communication, playing music and games and watching films etc.

Eric Udogwu, analyzing the four functions mentioned above argued that "computer software's are slotted into the hardware where they will move straight to the memory for storage, and thereafter to the processor for the selection of programmes which would be communicated to the operator.

Computer is a machine or apparatus, mechanical, electric or electronic, for carrying out especially complex calculations dealing with numerical data or with stored items of other information; also used for controlling manufacturing processes, or coordinating parts of a large organizations.

In yet another genre, it is used for word processing, payroll, personal record-keeping, general accounting, inventory control, sales monitoring as well as client invoicing, and court case management. Besides, they are basic planning tools and not ends in themselves. Modern information technology systems, when used, ensures national development by playing a significant function in the decisions making process as well as national policy planning endeavour.

The application of computers take away the boredomness associated with repetition as well as guarantee accuracy of analytical operations. Thus, planning and predicting

becomes a veritable tool overtime and cost efficiency, productivity optimization well-timed information distribution. All the aforesaid ensure maximum utilization of both human as well as material resources.

At present, banking institutions in Nigeria adopted rapid computerization of their operations as against the former analogue to a more information technology based approach. By and large, most banks operate the batch computer system by establishing a database in a central computer centre at their head offices. Data entry operators are keyed-in on daily undertaking. These data the computer uses in updating all accounts and it also produces print outs on which the branch will depend on for the reconciliation of accounts as well as the next day's operations. Anthonious Chukwudi Akukwe of the Department of Computer Education, Alvan Ikoku Federal College of Education Owerri contended that

> The banking institutions have indeed revolutionized their accounting and banking operations generally by ensuring that they have a computerized data base that aid them in achieving an efficient and expeditious service-oriented goal to their customers. Besides, for savings as well as current accounts respectively, the accounting computer has recourse to a ledger card, statement sheets; and with respect to withdrawal or deposit account, the computer data base automatically computes the interest as well as balance of account as opposed to the analogue operations of the 70s in Nigeria. (Akukwe, 2013).

On a few tiny silicon computer chips no larger than a man's fingernail, the text of the entire Bible can be recorded for instant replay. The age of the computer-spewing out thousands of millions of pages of paper-adds to an already large paper pile. The swift advance of communication technology-computers, miniature radio transmitters...has contributed in making the world a nation of spies. By installing additional computer software on an already existing computer system, employers can now monitor practically every move a user of video display terminals makes-secretaries, airline reservation clerks, postal workers and those who work at grocery checkout counters.

The Applicability of the Computer Technology to the Study of African History

Computer may be defined as a calculator, a machine or apparatus, mechanical, electric or electronic, for carrying out, especially complex calculations, dealing with numerical data or with stored items of other information; also used for controlling manufacturing processes, or coordinating parts of a large organization. A computer is also defined as a machine which takes data, processes it, and gives out information as a result of that

processing (E.N. Ekwonwune 2010: 2). We may store the answer in computer memories or process it as word and store it. The information the computer processes may be numbers, letters or even sounds.

In this paper, the applicability of the computer technology to the study of African history is approached against the background of the sources of African history which is made up of variety of sources. In this study, we are going to start with oral traditions. In his study of the Bakuba, Jan Vansina, demonstrated that oral traditions as "testimonies of the past which are deliberately, transmitted from mouth to mouth" and from generation to generation and as oral literature are legitimate, sources of historical knowledge. They can be classified as formulas including titles and names; poetry; lists including genealogies; tales; commentaries, and precedents in law. The sources, he goes on to indicate, can yield "tribal history, village and family history, or royal history; with tribal history recounting the migrations and the formation of chiefdoms, village and family history telling how villages were formed and how clans spread through the country and split themselves into sections and royal history describing the evolution of the kingdom through time. In reconstructing the history of the Bakuba, using exclusively oral traditions, Jan Vnasina made a methodological break-through, showing that what written record is to literate society, is what oral tradition is to non-literate society. This development made enormous impact on African historiography.

Because the computer has the capacity to accept, stores processes as well as accommodates data, its applicability in oral history cannot be overemphasized. The best option in the circumstance is to supply it with the vital information for communication, storage as well as processing. The software of the computer, thus, shall be among others interviews of some elderly men, the translation of these interviews, and video tapes of cultural entertainments-singers, dancers and drummers. This approach will guarantee accuracy, large storage capacity, consistency and speed. In a bid to ensure that unauthorized persons do not gain access to such stored information, a password is usually given to the user. In other words, the user can be given a coded number with which he can easily gain access.

What is more, programmes are stored in the "Mass Storage", the same way documents could be kept in a filing cache. At any particular point in time, one needs a specific reference; one can have recourse to the filing cabinet with a view to retrieve it. This data is linked to the computer especially the machines memory, so that it can be retrieved for computation. However, data reserved in the back-up or Mass Storage is indeed retained even if the storage medium is switched off. Although this information could be retrieved using a "floppy disc".

With regards to written documents, there are computer input devices which will accept handwriting, as someone pretyped on printed pages. Furthermore, there are graphic packages which allows one draw on the surface of the computer screen directly. Also some floppy disc could store information as much as 250,000 as well as half a million characters. An 8-inch, hard disc can store up to eight million characters, a size equivalent to about 11 year non-stop typing, eight hours a day. As the written aspect of African history was, at the on-set made-up of the accounts of explorers, missionaries, traders and consuls, especially as contained in their diaries and memoirs-these too could be stored, processed and replayed instantly when required.

The applicability of computer technology to archaeological finds is significant, in that it will be fed on the photograph of the find, the site, the species as well as the chronology of the find and all the information can be informed the computer to process for future use in historical studies. This is indeed a necessity due to the insistence that African history had to be approached from the inter-disciplinary angle. Resort had to be made to the works of social anthropologists, historical linguists, archaeologists, ethno-botanists as well as zoologists had to be used in the reconstruction of African history.

In this study, we shall emphasis the relevance of geography (environmental sciences) to the study of History. Both historians and geographers have implicitly or explicitly recognized the significance of one another's subject and objects of study and the relevance of one subject to the understanding of the other, although in the past, change, continuity, stability, nation-building, orthodoxy and radicalism, these are the materials of which history and geography produce in their audience. Generally, they induce space-time conception of world and lead to the recognition of personality, epochs, era, regions, structures, patterns and states or processes which call for explanation or interpretation and constitute leading obstacles in the study of the two disciplines. A philosopher, Immanuel Kant, made a distinction, which infact demonstrated the unity of both history and geography when he contended that:

> Description according to time is history, and that according to space is geography.... The former is a report of phenomena beside each other and geography and history fill up the entire circumference of our perception (E.N. Ekwonwune 2010: 2).

Since the early 1960's, a good number of the Nigerian historians like A. E Afigbo(A.E. Afigbo 1955:89, 267-280), E.J. Alagoa, (E.J. Alagoa, Ijo 1967: 279-288), Ola Balogun, (Ola Balogun 2016), and J.V. Erivwo, (Chukwuemeka Nwosu, 2016:5) just to mention a few have

used geography in historical writing. Afigbo, raised issues which actually invited geographers to the study of migratory history, A.E. Afigbo raised the issue of

> ...whether any logical relationship has been established between say the direction of migration and geographical data... (A.E. Afigbo1971: 65-66).

The computer in the present scenario could be used in videoing the direction of migration. The computer could be used for processes which call for explanation or interpretation which constitute major obstacles in the study of the two disciplines. Indeed, no, one will argue that history and geography are not the science of human communities if science means the pursuit of knowledge.

Here, we shall be exploring economics as an aid to history, the relationship between history and economics is not a matter of difference or how they are conceived rather the requirements of disciplines and their cross-fertilization is a function of how the tasks of both disciplines are perceived and conceived. In fact, the determination of "what happened and why it happened as and when it did" is an important matter, and that links history with economics, the other social sciences and sciences generally (Monday B. Abasiathai, 1988: 121). The social structure of any society is indispensable to an understanding of its political and economic activity (Monday B. Abasiathai, 1978), and the importance of social and economic history for an understanding of the modern world... is self-evident. The computer with its storage devices, can accept and process information with regards to "what happened and why it happened as and when it did".

Sociology and Anthropology constitute an aid to the study of African history. In other words, the contribution of the social sciences is appreciable given the fact that they supply theories and generalizations in terms of the operation of the society and processes of change, which invariably constitute the theme of history. However, these generalizations supply significant data that are useful to the historians searching for explanations or complex events. Anthropologists, according to E.J. Alagoa, have built up a number of historical models in Africa, some of which have stimulated productive reconstructions by historians but not all of them have been generally accepted (E.J. Alagoa, 1978:20). G.I. Jones, lecturer in Social Anthropology at Cambridge, England and a former colonial administrative officer, made the first sociological analysis of the institutions of the Eastern Delta States in the Trading States of the oil rivers (E.J. Alagoa, 1978).

Although the study paid more attention on the structure and development of political institutions, however defined, it was historical in nature. It is significant to note the study

was centered with developments in the nineteenth century, the eighteenth and the seventeenth centuries; and made debilitating effort at the reconstructions of earlier times. The focus was on internal historical development but since the period covered was one of intensive overseas trade, and since greater reliance was placed on external documenting sources, the study tended to give primacy to external factors for change over the internal (E.J. Alagoa, 1975:171-183). With respect to the above, permit me to say that the relevance of the applicability of computer to this aspect of the technique for studying African history is indispensible.

It is somewhat difficult to appreciate the fact that the physical science disciplines could have connection with the study of history. In the study of African history, historians have used the medical sciences as a cornerstone to study relationships between peoples, through blood-groups as well as typology. Note that the study of epidemics as well as pathological patterns, have a connection on the fertility and virility and the growth of populations, in ancient Egypt, a sizeable proportion of diseases of the past were found in skeletons of mummies that were diagnosed. Furthermore, the mathematical sciences, nowadays, has been contributing immensely to historical studies with respect to the study of Economic-History. The study of the depopulation of Africa through the transatlantic slave trade, have also included among others statistical characteristics in a bid to quantify the total number of Africans shipped to the new world, as well as the impact of such population movement on the growth of population and the historical development of Africa(Monday B. Abasiathai, 1978: 520).

By and large, it is a bit easy to realize the relevance of history with regards to the domestication of animals as well as crops. The contributions of the biological sciences are infact relevant to the historian in terms of the studies of the history of Agriculture. It is important to appreciate that the Ethiopian highlands as well as the Niger Delta region were indeed known as early centres of civilization and population density due to its crop domestication. Also in the Nile Valley area of the horn of Africa, irrigation agriculture was significant to its early civilization. Where the use of computer technology is used for storage of statistical data of the Atlantic slave trade, it would have been easy to give exact figures of slaves that were taken from Africa as opposed to speculative quantification because speed and accuracy are very essential in computing. The appropriateness or suitability of the computer to the study of African history will lead to performing tasks effectively without wasting much time as well as lead to efficiency in the study and search for historical knowledge.

Today, the use of multimedia, internet (especially the World Wide Web (WWW), and various forms of distance learning (as obtainable today in many foreign universities offering undergraduate and postgraduate programmes online) cannot be overemphasized. Thus, interest in using them as tools to support historical studies is growing, both from the perspective of a historical educator and that of African historical learner. Therefore, African history cannot be left behind in this significant technological advancement.

Oral communication skills are very important in the use of oral tradition in the reconstruction of African history. In todays study of African history, considerable emphasis is given to oral activities between the historian and his informant, in which historians use their calling to go for information that is relevant to his study. These activities include simulations, role-plays and discussion. Computer simulations provide a stimulus for such a work, as they offer both a focus for oral activity and a continually changing scenario for historians to talk about. Computers have a useful contribution to the development of oral skills if they are used wisely, (Fidelis C Obodoeze et al, 2011:825) by historians in African historical reconstruction.

Experts estimated that by the mid-1990s, more than fifty million, computers were linked to the information superhighway by a way of a network called the internet (Net) and by the end of the 2010, more than three hundred million computers. The internet is a computer-based worldwide information network. It is composed of a large number of smaller interconnected network called internets. These internets may connect tens, hundreds or thousands of computers, enabling them to share information through a series of fibreoptic cables or other connectivity media, (Fidelis C Obodoeze et al, 2011:830) which is relevant to the African historian in recapturing the history of segmentary societies. A historian with a Personal Computer (PC), you can get connected to the internet via a Modem (Modulator-Pemodulator) which is a small device and can be attached to your computer. It connects your computer to another or other computers over communication/telephone lines like GSM or CDMA as is the case here in our country. Nonetheless, in order to take advantage of the greatest internet software like the Microsoft Internet Explorer or Mozilla Fire Fox for exploring the Web Fast you will need a minimum of Pentium 4 computer system or at least a Pentium M laptop computer running Microsoft Windows XP Professional SP2/3, vista or the latest windows 7 operating system. Once a historian is connected to the Net he will be able to get access to:

* Email: Electronic Mail which allows him to instantly send and receive messages from all over the world.
* WWW: World Wide Web

* Chat: A way to communicate in real time to others.

The significance of computer based technology application to the African historians is indeed indispensible. According to Dunker, computer technology as a tool for the African historian can lead to significant improvement in historical scholarship. Among these are self-esteem, vocational preparedness, language proficiency and overall academic skills (Fidelis C Obodoeze et al, 2011:831).

Notwithstanding the merits the historian finds in the importance of computer based technology application to the study of African history, the historian should also be mindful of the shortcoming of computer technology. The challenge of garbage-in garbage-out; the problem of mistakes, the problem of cost, all manifest. Other handicaps is that there is the general conception that computers constitute threats to human jobs in that it has led to downsizing employees of most banking industry in Nigeria.

Conclusion

The relevance of the applicability of computer technology to the study of African history and International Studies has been given an indept analysis in this work. Besides, approaches and roles of computers in the study of African history, learning and research, have changed tremendously worldwide in the last three decades. Nowadays, the imperative of computer technologies have made multimedia and information gathering to advance; simple simulations and exercises, primarily gap-filling, and multiple-choice drills, now available. Computer-based technologies have now made African history, learning and research to be easy, exciting and result-oriented. Computer-based technologies can assist scholars in history and international studies to develop sharp historical skills and capability easily and faster by integrating various technological pedagogical features and developments.

Computer application can aid in these regards in the spheres of using such as concordance software with large historical corpora by providing students with the means to investigate historical data in authentic contexts; multimedia programmes incorporating historical data-recognition software can immerse students into rich environments for historical research and internet allows for a great number of opportunities to communicate in the target areas, access textual and multimedia information and publish for global audience and allow both students and teachers to conduct long-distance communication and collaboration in authentic research and multimedia publication.

In conclusion therefore, the adoption and the applicability of computer-based technology to the study of African history and International Studies cannot be over-emphasized. This is because it is long overdue in the teaching, learning and research in the Nigerian universities and institutions of higher-learning as is the case in the western world.

References

A.E. Afigbo (1971), "Ibibio Origin and Migrations: A Critique of Methodology", Nigerian Magazine, Nos. 107-109.

A.E. Afigbo, (1955), "Efik Origin and Migrations Reconsidered" Nigeria Magazine, No. 89.

Anthonius C. Akukwe, (2013) Computer Programs: Theory and Practice, (Owerri: Colon Concepts Ltd.

Anthonius Chukwudi Akukwe (2019), Personal Interview, Department of Computer Education, Alvan Ikoku Federal College of Education, Owerri.

Awake, (1988), Electronic Eavesdropping its so Easy" Editorial Article, Vol. 69, No. 10, 6, May 22.

Awake, (1990) "The Garbage Glut: Will it Bury Us and Disposal Products Become Indispensable Garbage". Editorial Articles, Vol. 71, No. 18, 3 and 6, September.

Chambers 20th Century Dictionary, (n.d.) Bungay, Suffolk: Richardclay: The Chauser Press Ltd.

Chukwuemeka Nwosu, (2016) "The Inter-disciplinary Methodology to the Study of History", in THUCYDIDES: International Journal of Arts, History and International Studies, Dept of History and International Relations, Abia State University., Vol. 1. No. 1. December.

E.A. Udo, (1976), "The Ibo Origin of Efik by A.E. Afigbo: Review". The Calabar Historical Journal, Vol.1. No.1. June.

E.J. Alagoa, (1967), Ijo Origin and Migrations, Nigerian Magazine, No. 91 and No. 92, March.

E.J. Alagoa, (1975) "The Inter-disciplinary Approach to African History in Nigeria, Presence Africané, No. 94.

E.J. Alagoa, (1978) "The Relationship between History and Other Disciplines in Tarikh Historical Method, Vol. 6, No. 1.

E.N. Ekwonwune (2010), Basic Information Systems: An Introduction Owerri: Cel-Bez Publishing Co.

Eric Udogwu, (1990) Personal Interviews Conducted by M.C. Dike, Centre for Computer Systems and Services, Wetheral Road, Owerri.

Eskor Toyo (1988), "Economics As An Aid to History," in Monday B. Abasiathai, Expanding Frontiers of African History: The Inter-Disciplinary Methodology, Calabar:Wusen Press Ltd.

Fidelis C Obodoeze et al, (2011) Computer based Technology in Foreign Language Education in Nigeria for Sustainable Development, in A.B.C. Chiegboka et al (ed), The Humanities and Sustainable Development, Nimo: Rex Charles & Patrick Ltd.

J.V. Erivwo "The Tradition of Origin of Urhobo of the Niger Delta", Quoted in Chukwuemeka Nwosu, "The Inter-disciplinary Methodology to the Study of History", in THUCYDIDES: International Journal of Arts, History and International Studies, Dept of History and International Relations, Abia State University., Vol. 1. No. 1. December.

Jan Vansina, "Recording the Oral History of the Bakuba-1, Methods", 45-46. He also analyzed in this article how oral traditions are preserved and the aims for doing so; how to tackle the problems inherent in oral traditions; and the fact that written documents is to the literate societies what oral tradition is to non-literate societies.

Kenneth Stampp (1953) "The Historian and Southern Negro Slavery", in American Historical Review, LVII, April.

Monday B. Abasiattai, (1978) The Inter-disciplinary Approach to African History Expanding Frontiers of African History: The Inter-disciplinary Methodology, Calabar: Wusen Press Ltd.

O.E. Uya (1984) , "Trends and Perspectives in African History", in Erim O. Erim and O.E. Uya, Perspectives, and Methods of Studying African History, (Enugu: Fourth Dimension Publishers.

Ola Balogun (2016), Ibini Ukpabi of Arochukwu, Quoted in Chukwuemeka Nwosu, "The Inter-disciplinary Methodology to the Study of History", in THUCYDIDES: International Journal of Arts, History and International Studies, Dept of History and International Relations, Abia State University., Vol. 1. No. 1. December.

Stanley M. Elkins, (1964), Slavery: A Problem in American Institutional and Intellectual Life Chicago: The University of Chicago Press.

W.G.V. Balchin (1970), Geography: An Outline for intending students, (London: Routledge and Kegan Paul.