The Impact of Gender and the Use of the Digital Library Education in Nigerian Higher Institutions.

Eniekebi Regina Ejiroghene

Library Department, College Of Education Warri, Delta State
The Impact of Gender and the Use of the Digital Library Education in Nigerian higher institutions.
Corresponding Author: Eniekebi Regina Ejiroghene

Abstract: Higher education in Nigeria has come under severe criticisms in recent time due to poor quality of its products. There is urgent need for academic institutions in Nigeria to catch up with innovations in educational practices in developed economies. This paper explores the benefits of digital libraries to higher education in Nigeria. It examines the challenges being faced by higher education in Nigeria. It highlights the fact that digital libraries are critical and essential for effective teaching, research, and learning in all tertiary institutions and it should therefore, be priority. However, the paper stresses on the Gender Difference in the use of digital libraries, that the development of digital libraries should not be conceived as a panacea for the myriads of challenges facing higher education in Nigeria but that it is a technology that promises to address some of these challenges. Therefore, strong and unwavering commitment by all the stakeholders towards the deployment of digital libraries in tertiary education is recommended.

Keywords: Impact, Gender, Use, Digital Library, education

I   INTRODUCTION

Technology offers opportunities to be innovative, but not all e-learners have the same approach to the use of digital library resources. The level of ICT knowledge and use varies from one learner to the other. Not all information resources that e-learners need are available in an electronic format. Many of our most valuable research materials are still print-based (Sharifabadi, 2006). There has been a shift away from purchasing print materials to be housed in a physical building towards providing access to the licensed digital resources made available over a computer network, librarians continue to work to resolve issues pertaining to distance delivery of resources that are available in a digital format. Online catalogues and indexing and abstracting systems provide researchers with convenient access to bibliographic information about valuable scholarly documents. With an increase in digital library collections that are accessible outside the library via the internet, students of the university still visit the University library frequently. Most students cannot afford to purchase laptops and lack search skills to access the Internet outside the library. Digital libraries have become a force in transforming the educational system globally. Without information technology, there is little chance for institutions in Nigeria to develop. Women in developing countries may be more disadvantaged than men when into comes to information technology. For the sake of educational and social development, it is important that women in developing countries have access to these technologies (Olatokun, 2008). Hargreaves (1997) describes education systems now as more "porous and permeable". In the traditional education system, learning takes place mainly in a classroom. The abundance and availability of digital information makes information ubiquitous. The University of Ibadan, Nigeria, was established in 1948 and was the first university library to introduced library and information science in West Africa. The university quest for effective organization and dissemination of information led to the automation of the university library in 1993. university library is now completely computerized. Castells (1993) asserts that it has become increasingly impossible for any society to innovate entirely by itself without transferring knowledge from other parts of the world and adapting it to the local situation. Davenport (2000), claims that this creates a demand for a skilled labour force. Castells (1993) maintains that it requires human resources to adapt their skills continuously to the fast pace of technological change and apply research findings to local situations and be part of global scientific networks.

Olatokun (2008) states that the university sector in sub-Saharan Africa has a high concentration of skilled human resources. The training infrastructure outside the university system is weak and poorly developed. Swartz (2000) contends that in such a situation, society relies heavily on the universities to provide technology both in specific skills general learning ability to promote development. Universities are also challenged to

establish connections with other knowledge-producing organisations. This calls for increased access to information resources. That includes a digital library with e-learning resources. Kachel (1993) believes that such innovations will be beneficial to students, cognitively and educationally. Mehta (2000) asserts that access to these resources, and cooperation among institutions, is essential for economic transformation and development.

Adomi and Ogbomo (2003) found that students used the library effectively, with more than 70 percent using the library daily. Though studies have been carried out on the use of university libraries, none has focused on a gender in the use of digital libraries in Nigeria. This study can help bridge that gap. It is hoped that its findings can help library administrators make materials more useful, accessible, and relevant to all users. Ideas and beliefs are rooted in one's lived experiences, historical and cultural realities, political outlook and economic position. Improvement both in the lives of women and an improvement in gender equity at all levels of education in Africa, especially at the secondary and tertiary levels, 1 share the view of Steady (1987) who argues for "a cooperation between men and women where they operate jointly to maintain a cosmological balance". As feminism insists the personal is political, so my experiences as a mother, wife, student, friend and middle-class woman who works in association with men in an ail these situations shape my analysis in this. As a female in the field of education, I am convinced that if educators and policy maker in Africa devote substantial time and effort to ensure that women have equal access to quality education, African women will have increased life chances and gain better employment opportunities. Equality of opportunity, as understood today, does not mean merely enriching programs to help girls "catch up" with boys (Gaskell, claren, and Novogrodsky, 1989). The aim must be to increase the respect, and the maternal rewards associated with what women do, as well as encourage access for women to areas that traditionally have been dominated by men. There is therefore an urgent need to improve and expand research on gender issues in order to reform African education. Such research if acted upon will contribute in no small way to change the situation in which the majority of African women find themselves.

Over view on Education

"Education" is usually associated with terms such as "development," "modernity," "independence" and "status". Education and development represent crossroads that bring together academics, politicians, planners, practitioners and people in the pursuit of the worlds biggest and perhaps most exciting challenge (Fagerlind and Saha. 1989). Education may be defined as the varied ways, strategies and options through which people come to know their world and act within it. Education may also be described as a relationship between power and knowledge that governs our understanding, our constructs of self and others and our actions (Friere, 1997). Education, both within and outside school can operate as a form of governance by a state, colonial power or a religious group or leader over those who are constructed as being in need of education. Although the effects of schooling or education are often beneficial to individuals, education may also be constructing and exclusive of others (Bloc and Vavrus, 1998; Dei, 1994, 1998 and 1999; Friere, 1997; Leach, 1998). Having defined education, it is also important to distinguish between "education" and "schooling". Schooling refers to the formal structures and procedures of going to school. "Education" happens at many sites and in many contexts - schools, universities, work places, homes, communities, am and media (Dei, 1998; Shujaa, 1994). In the context of modernization, education is usually assigned two major roles: human-power training and socialization. Educational systems reflect the values and practices of the larger society. Education through schooling is the formal institutionalized and systematized vehicle that socializes youth into the values of society. Education is not a benign good at every moment of its historical path; rather it is a set of practices that have been used differently by individuals. Groups, governments and international agencies depending on their intention, power and conceptions of gender. Education should be a way to promote individuals, groups and national or international interests but apparently this has not always been the case. For women in Africa, education in general terms, governs, disempowered and regulates the lives of women (Bloch, Beoku-Betts and Tabachnik, 1998; Sweetman, 1998; Leach 1998). Arguably, the educational system in Africa has remained essentially the same as that which was introduced by the colonialists. Even after independence, it hardly changed (Njeuma, 1993; Odora, 1993). The growth in Africa of western style formal education has created a totally new dilemma for women, one in which both their absence and presence in schools act to their disadvantage. On the one hand, their absence from school makes it difficult for them to compete with men for the scarce jobs. On the other hand, being present at school in growing numbers ends up reinforcing their dependence on men (Robertson, 1985; Hollos, 1998).

Gender Equality and Education

Recent developments in feminist analyses have produced complex explanations of gender differences in education. "Gender" refers to relations of power between men and women; to relations of inequality and to matters of identity and social relations that structure the lives of men and women. Gender relations are socially organized relations that differentiate males and females. While people, by and large, are both either male or

female, they still have to acquire a gendered identity. One's gender becomes part of one's identity, one's sense of which one is (Elson, 199 1; Anderson-Levitt, Bloch, Soumare, 1998; Kessler and McKenna, 1978, Thome, 1993; West and Zimmerman, 1993). Gender equality means that a woman has the opportunity to enjoy good health and quality of life to the same extent a man does; that she cm read, write and participate freely in the public sphere, that she has time to herself and can enjoy both dignity and self-esteem. Many of the constraints women face operate to the advantage of men (Elson, 199 1; Acker, 1984; Elgvist-Saltzman, 199 1, Megamy, 1984). It is also important to note that there are different ways in which women experience gender. I share Elson's (1991) view that even though both rich and poor women face a common danger in public places after dark, a poor woman will probably have more interest in the improvement of public transportation than a rich woman who can afford to purchase a car. Giving females equal access to education does not necessarily mean that al1 other forms of inequality have been removed. People in different situations have different needs and talents. Thus removing one form of oppression may not necessarily bring about equality. In the socialization of boys and girls in most societies, the sexes are treated differently from birth and different expectations are held up to them within the family and in the early years of schooling. Children become aware at an early age of the culture's distinctions between masculine and feminine roles and of the culture's higher valuation of men and masculine roles. This process of socialization begins in infancy and continues throughout childhood and adolescence into adulthood. Such patterns of socialization have great consequences for learning (Elgvist-Saltzman, 199 1 ; Acker,1984).

In most African countries, work is gendered; that is to say, some tasks are seen as "women's work" while other tasks are seen as "men's." "Equity" means equal treatment of people even though people in different situations may have different needs or talents. Educational equity includes fairness and representation in education (Dei. 1996, 1998). Educational equality, on the other hand, refers having access of space in school settings and the sustaining of one's presence in the school (Dei, 1998). Gender inequity prevents women from acquiring certain positions that are well rewarded in society. It hampers women from forming well-defined notions of what they want and encourages them to submerge their own interests beneath those of men and children. Even in countries like Britain,and the United States, where equal rights for women are encoded in the laws, women still find enormous difficulties in exercising their rights (Adams and Kruppenbach, 1986; Elson, 1991).

Gender and Schooling

Girls and women have always been at a disadvantage when it comes to education. Feminists observe that in most societies, while women are present in most social situations, they are hardly visible in state arenas (Acker, 1984; Megamy, 1984). Even where women are present and active, most social actors fail to acknowledge women's presence. Deliberate efforts have also been made to exclude women from certain areas such as politics. The science professions and executive administrative duties despite their attempts to enter such domains, especially in African countries. In general, the role of women is that of less privileged members of society and has always been subordinate to the role of men. Schools seem to pave the way for a sexual division of labor in adulthood. In many societies, schools are organized around the notion that the genders have different needs and interests. The gender of a child provides a basis for differentiation throughout a child's school life. Children become "boys" and "girls" for registration, and queuing (Acker, 1984). This makes it difficult for females to choose non-stereotypical subject options if they wish to, or even to imagine that choices are possible beyond those usually Assigned to girls or women. In African schools, men dominate the authority positions in most fields. One exception is in the single sex female schools and in junior schools for children eight or less. It is no wonder that children assume that such arrangements are the expended shape of adult life (Acker, 1984; Elgvist-Saltzman, 199 1).

II   GENDER DIFFERENCE IN THE USE OF DIGITAL LIBRARY EDUCATION

Many scholars have discussed the issue of gender difference among students towards the use of library resources. Manda and Mulkangara (2007) report that gender is associated with the use of electronic information resources, and that male postgraduate students were more likely to used e-resources than female students. They further report that even when there was controlled for attitude towards the use of e-resources or training in the use of e-resources the relationship between gendered and e-resources was maintained. A study by Amkpa (2007) revealed that male and female students differ significantly in attitudes towards computer applications which later affect their job opportunities after graduation. A study by Tella and Mutula (2008) on gender difference in computer literacy reported that students with higher computer literacy were more inclined to accessed and make use of library facilities. They further reported that differences exist between female and male undergraduate students at the University of Botswana with regard to computer literacy. In the same vein, Ford and Miller (1996) report that gender is a predictor of internet use and attitudes, males seem to enjoy browsing on the internet for enjoyment, while females tend to only use it for work-related purposes. Ford, Miller, and Moss

(2001) found that women tend to experience more difficulty in finding information online than men, and Steinerova and Susol (2007) revealed that statistically, there is high preference off or the Internet as the first source of information among men. Men also put more stress on non-paid electronic resources as opposed to women's more frequent use of licensed resources. Ozoemelem (2009) reports a high frequency of use of electronic information resources by both male and female postgraduate students. The gender gap in electronic resources usage appears negligible. Different studies have identified how students acquire their search skills for the use of e-resources. Klatt (2001) reports that a majority of students obtained their knowledge by trial and error or with the help of fellow students. Similarly, Adomi, Omodeko, and Otlo (2004), report that most students acquired Internet knowledge and skills through practical self-teaching. Irrespective of gender, e-resources are used by students for different purposes. Aduwole (2003) and Obaje and Camble (2008) reported that e-resources are used for theses/dissertation/ project writing by postgraduate and final–year students. Reiner and Smith (2008) and Badu and Markwei (2005) all reported that students used e-resources mainly for research and assignments.

Use of digital library
It is the extent to which postgraduates students patronize and benefit from the available resources and services in libraries. In this study, use is meant to describe the extent to which the digital resources facilities and services are exploited or utilized by the postgraduate students of the private universities. While Digital Library is an organization, which might be virtual, that comprehensively collects, manages and preserves for the long term rich digital content, and offers to its user communities specialized functionality on that content, of measurable quality and according to codified policies. (Diyaolu Akorede Mufutau, Okunlaya Rifqah Olufunmilayo Afolake, And Ibrahim Rasaki Oluwadamilare 2015)
1. Train and retrain library staff and students to enhance effective searching skills for the use of University digital library.
    Students in all tertiary institutions in Nigeria should be encouraged to be computer literate to access information personally on the internet's.
    The library should be open all night.
    Electric power must be upgraded to enable the university to function effectively at night.

III   IMPACTS OF DIGITAL LIBRARIES TO HIGHER EDUCATION IN NIGERIA
Digital libraries powered by digital technologies open doors of great possibilities and opportunities in higher education system in Nigeria. It is a technological innovation that promises a paradigm shift in teaching, research, and learning which is indispensable in 21st century education. The flexibility of learning provided by digital libraries enhances and advances the informal and distance learning in tertiary institutions. It gives the distance learner the opportunity to attain the highest level of education from their offices or homes. Wallace, et al 1996, avers that the digital libraries encourage authentic inquiry learning by providing students access to online resources, and such resources permit students to enjoy a flexible learning arrangement which allows them to pursue their own interests within the bounds of the curriculum. Access to online resources 24/7 implies that learners are free to participate in learning activities when time permits and such freedom have greatly increased the opportunities for many students to participate in higher education. Interestingly, many more students who were previously constrained by other commitments are now finding the opportunities to do so The list includes full-time housewives, prisoners, physically challenged people and all those who have been struggling with 'elusive admission' can achieve their educational aspirations. The deployment of digital libraries in higher education acts as a catalyst for change in this domain. Digital libraries promote the emergence of educational community that shares thousands and thousands of digital resources in a networked environment. Thus digital libraries encourage resource sharing among members of a scholarly community. These benefits according to Rahman cited by Ikpaahindi in 2006 include free flow of information resources, better access to information resources, maximization of information resources, faster provision of information and literature support to users, avoidance of duplication of effort, and reciprocal exchange of local publications. In conventional educational setting, digital libraries offer both teachers and students the opportunity to utilize digital resources and tools in different formats without being present in the library. Marchionini and Maurer1995 emphasized that: "digital libraries have obvious roles to play in formal learning settings by providing teachers and learners with knowledge bases in a variety of media. In addition to expanding the format of information (e.g multimedia, simulations), digital libraries offer more information than most individuals or schools have been able to acquire and maintain. Digital libraries are accessible in classrooms and from homes as well as in central library facilities where access, display, specialized and tools may be shared. Remote access allows possibilities for vicarious field trips, virtual speakers, and access to rare and unique materials in classrooms and at home. The promise is one of better learning through broader, faster, and better information and communication services".

The capabilities of digital libraries will open doors for opportunities to expand the pool of teachers with varying roles able to provide support for learners in variety of flexible settings with the changing roles of the teacher Oliver 2002 argued that many people who were not highly qualified will participate in the teaching process. These include work place trainers, mentors, and specialists from the workplace and so on. Thus a paradigm shifts from didactic teaching roles to more facilitative roles. In addition to changes from conventional teaching style that revolved around teachers planning and leading students through a series of instructional sequences to achieve a desired learning outcome is the shift in learning style. Digital libraries promote self guided and informal learning. Independent learners are self motivated, innovative and creative thinkers. Echezona , et al.2009 opined that education that is oriented towards critical thinking and self-directed learning serves the individual over a life- time. In this regard digital libraries support learning as an 'active process of constructing knowledge rather than acquiring knowledge' and learning that facilitates 'personal understanding and the development of meaning in ways which are active and interpretative. The products of such a learning process that emphasizes active construction of knowledge are creative and self-motivated and definitely will distinguish themselves unlike the products of a learning process that perceives the learners

as passive recipients of knowledge.

Similarly, the technology of digital libraries helps to reduce the gap between those who have access to information and those who do not. This is often referred to as digital divide. According to Gyamfi 2005, digital divide is the disparity between nations who have access to expertise, knowledge, and capacity building tools of the 21st century and those who do not. But through digital libraries the students and faculty could have access to an ocean of information resources, acquire skills and knowledge that will make them productive in the 21st century. Scholarship thrives on collaboration, cooperation, and communication in a networked environment. A networked environment supports knowledge generation, communication, consumption and dissemination. Wallace, et al.1996 stressed that through digital libraries, students collaborate with others to discuss and try out ideas and challenge the ideas of others. No doubt, contact, collaboration, and cooperation provide enabling environment for linkage programmes between and among universities which gives added values to higher education globally. It opens up new frontiers for teaching and learning and facilitates collaborative research among tertiary institution in Nigeria and other parts of the world.

IV CONSTRAINTS TO DEPLOYMENT OF DIGITAL LIBRARIES

A number of factors impede the deployment of digital libraries initiatives in higher education in Nigeria. A fundamental factor hindering the deployment of digital libraries in tertiary institutions is fund. Building and maintaining of digital libraries according to Waters 2001 is expensive. Besides the technical aspects, cost, and other considerations include selecting content and managing intellectual property are to be considered. Computers and internet connections are backbone of digital libraries and the cost of procuring them constitute major impediments for the implementation of digital libraries in academic institutions in Nigeria.The global economic meltdown further exacerbates the situation. In most African countries, Nigeria inclusive the infrastructure that support digital technology initiatives are inadequate. Ani, et al.2005, remarked that Nigeria is deficient in the acquisition of ICT infrastructures such as computers, telephone lines, VSAT, computer networks and so on. The decision to develop ICT infrastructure is basically political and except the big shots at the corridors of power bring this issue forcefully into the mainstream, the development of digital libraries will remain a pipe dream. Librarians are the interface between digital libraries and the users. Ani , et al.2005 Pointed out that there is low- level ICT skills among librarians in Nigeria and most of them lack the requisite skills to function in the digital environment.

V CONCLUSIONS

Higher education in Nigeria has a lot to gain if the development of digital libraries is supported by the stakeholders. The challenges may seem overwhelming but strong and conscious commitment on the part of policy makers and executors is indispensable. Librarians cannot afford to remain on the other side of the digital divide. To ensure the digital inclusion of tertiary institutions in Nigeria, concerted action geared towards the acquisition of ICT infrastructure is imperative. Digital libraries are critical and essential for effective teaching, research and learning in all tertiary institutions in the 21st century therefore it should be a priority. At this juncture, it is pertinent to point out that the development of digital libraries should not be conceived as a panacea for all the challenges of higher education in Nigeria but it is a technology that promises to address some of these challenges.

REFERENCES

[1] Acker, Sandra (1984). Sociology, Gender and Education in Acker, S., Megarry, J., Nisbet, S., Hoyle, E. (Eds.),World Yearbook of Education. New York: Nicholas Publishing Co.
[2] Acker, Sandra (1994). Gendered Education. London: Open University Press.

[3]   Adams, M. N. & Kmppenbach, S. E. (1986). Some Issues of Access and Equity in Education of Africa Feales: Progress and Prosects. U.S.A: Florida State University.

[4]   Adams, D.(1977). Developmental Education in Comparative Education Review. 2 1 (2) (3) 296-3 1 O.

[5]   Adams, D. & Bjork, R. M. (1969). Education in Developing Areas. New York: David McKay.

[6]   Adomi, E. E, & Ogbomo, M. O. (2003). Gender factor in utilization of library resources at Delta State University, Abraka, Nigeria. Education Libraries Journal 46(1) Spring.

[7]   Adomi, E.E., Omodeko, F.S., & Otolo, P.U. (2004). The use of cybercafés at Delta State University Abraka, Nigeria. Library Hi Tech, 22 (4), 383-388

[8]   Amkpa, S.A. (2007). Gender and age difference in computer use and attitude among students of University of Maiduguri. The Information Technologists, 4(1), 60-67

[9]   Anasi Stella Ngozi Ifeoma (2012) Digital Libraries and Higher Education in Nigeria in 21st Century DESIDOC Journal of Library & Information Technology, Vol. 32, No. 4, July 2012, pp. 353-357 © 2012, DESIDOC

[10]   Anderson-Levitt, Bloch, and Soumare, (1989). Inside Classrwms in Guinea: Girls' Experiences. In Bloch, M., Beoku-Betts, J. & Tabachnick, B. (Eds.), Women and Education in Sub-Saharan Africa: Power. Opportunities and Constraints. Boulder, CO.: Lynne Rienner.

[11]   Ani, O.E.; Atseye, E.U. & Esin, J.E. (2005), Issues sand challenges of globalization of library services in Nigeria in the 21st century. Information Development, 21(3), 193-201.

[12]   Badu, E.E., & Markwei, E.D. (2005). Internet awareness and use in the university of Ghana. Information Development, 21 (4): 260-268

[13]   Bassi, M. D. (2010), Attitudes of students toward the use of university libraries' electronic resources in Adamawa state. Maiduguri: University of Maiduguri

[14]   Bassi Musa Dauda (2011) Gender Differences in Use of Electronic Resources in University Libraries of Adamawa State, Nigeria Assistant Librarian University Library Federal University of Technology, Yola Dr. Emmanuel Camble Reader Department of Library Science University of Maiduguri http://unllib.unl.edu/LPP/ Library Philosophy and Practice ISSN 1522-0222

[15]   Bloch, M., & F. Vavrus (1998). Gender and Educational Research, Policy and Practice in Sub-Saharan Africa: Theoretical and Ernpirical Problems and Prospects. In M. J. Bloch, F. Vavrus, (Eds.), Wornen and Education in Sub-Saharan Africa: Power Opportunities and Constraints. Boulder, CO. U.S.A: Lynne Reinner.

[16]   Bloch, M., Beoku-Betts, J., & Tabachnik, B. R. (Eds.) (1998) Women and Education in Sub-Saharan Africa: Power. Opportunities and Constraints. U. S..4. : Lynne Reinner.

[17]   Castells, M. (1993). The university system: Engine of development in the new world economy. In: Ransom, A., et al. (Eds.). Improving higher education in developing countries. Washington, D.C.: The World Bank.

[18]   Davenport, P. (2000). Development and the knowledge of economy. In: Bourne, R., (Ed.) Universities and development. London: ACU.

[19]   Dei, G. S., (2000). The Role of Indigenous Knowledges in the Academy. In International Journal of Inclusive Education. Vol. 4, No.2 1 1 1- 132.

[20]   Dei, G., Hall, B. and Golden-Rosenberg, (Eds). (2000). Indigenous Knowledge in Global Contexts: Multiple Readings of Our World. Toronto: University of Toronto Press.

[21]   Dei, George S. (1993). Learning in the Time of Structural Adjustment Policies. Canadian and International Education, 22(1): 43-65.

[22]   Dei, George S. (1993). Sustainable Development in the African context: Revisiting Some Theoretical and Methodological Issues. African Development. 1 8(2), 97- 1 10.

[23]   Dei, George S. (1994). The Challenges of Anti-Racist Education Research in the African Context. African Development. 19 (3), 5-25.

[24]   Dei, George S. (1998). Education for Development: Relevance and Implications for the African Context Canadian Journal of Development Studies. 19 (3).

[25]   Dei, George S. (1998). Interrogating African Development and the Diaspora Reality. Journal of Black Studies. 29 (2): 14 1 - 1 53.

[26]   Dei, George S. (1999). Lecture Notes. Modernization and Development in America Contexts.

[27]   Dei, G, S. & connelly c., (1998). Review Essay: Reclaiming Afncan Women's Agency as Actors in Education. [Review of the book Women and Education in Sub-Saharan Africa: Power. Opportunities and Constraints: Women and Change in the Developing World] Unpublished.

[28]   Dei G. S & Asgharzadeh A. (2000) The Power of Social Theoc: The Anti-Colonial Discursive Framework. OISEAJniversity of Toronto. (Unpublished).

[29]   Diyaolu A. M., Okunlaya R. O A., & Ibrahim R. O. (2015) Influence Of Demographic Factors On The Use Of Digital Library By The Post Graduate Students In Private Universities: A Case Study Of Babcock

And Covenant University In Ogun State Information and Knowledge Management www.iiste.org ISSN 2224-5758 (Paper) ISSN 2224-896X (Online) Vol.5, No.2,

[30] Dolphyne, F. (1987). The Ghana National Council on Women and Development: An Example in Concerted Action. In Christine Oppong (Ed.), Sex Roles. Populations and Development in West Africa: Police Related Studies on Work and Demographic Issues. pp. 2 12- 18. London. James *Cuny* Ltd.

[31] Echezona, R.I.; Ezema, J.I. & Asogwa Eze, B.(2009),Globalization, information revolution and higher education in Nigeria: The challenging roles of library professionals. Inter. J. Lib. Inf. Sci., , 1(6), 74- 81.

[32] Elgvist-Saltzrnan, Inga (1991). Education and the Construction of Gender. Kvinnovetenskapligt Forums rapportserie, No. 2. Urneil: UmeA Universitet.

[33] Elson, D. (1991). Male Bias in the Development Process: An Overview. In D. Elson (Ed.), Male Bias in the Development Process (pp. 1-28). Manchester : Manchester University Press,

[34] Fagerlind, 1. & Saha, J. (1989). Education and National Development. (2"d ed.) Oxford: Pergamon.

[35] Federal Ministry of Education (2000), National Virtual digital Library Project. Abuja: National Universities Commission Frankfurt/M.

[36] Freire, P., (1997). Mentorine the Mentor: A Critical Dialoge with Paulo Freire. New York: Peter Lang.

[37] Ford, N.; Miller, D.(1996). Gender difference in internet perception and use: In Collier, M. & Arnold, K. (eds.): Electronic Library and Visual information Research. ELVIRA 3: Papers from the Third ELVIRA conference 30 April 2 May 1996, 87- 100 London ASLIB

[38] Ford, N.; Miller, D. & Moss, N. (2001). The role of individual difference in Internet searching: An empirical study. Journal of the American Society for Information Science and Technology, 52(12), 1049-1066

[39] Gaskell, J., (1983). The Reproduction of Family Life: Perspectives of Male and Female Adolescence. The British Journal of Socioloev of Education. 4 (1), 19-38.

[40] Gaskell, J. (1992). Gender Matters from School to Work. London, UK.: Open University Press.

[41] Gaskell, J., McLaren, A., & Novogrodsky, M. (1989). claiming an Education: Feminism and Canadian Schools. Toronto, ON.: Our Schools/Our Selves Education Foundation. 1 O6

[42] Gyamfi, A. (2005), Closing the digital divide in Sub-Saharan African: Meeting the challenges of the information age. Information Development, 21(1), 22-30. 19

[43] Hargreaves, A. (1997). Rethinking educational change with heart and mind. Alexandria, Virginia: ASCD.

[44] Hollos, M., (1989). The Status of Women in Southern Nigeria: 1s Education a Help or a Hindrance? In M-Bloch, J. Beoku-Betts and B. Tabachnick. (Eds.), Women andEducation in Sub-Saharan Africa: Power. Opportunities and constraints. Boulder,CO. USA: Lynne Rienner.

[45] Ikpaahindi, L.(2006) Resource sharing in cataloguing: Bibliographic and indexing services in an Information and communication (CT) age. Paper presented at 26th Annual Cataloguing, Classification and Indexing Seminar/Workshop, Abeokuta,.

[46] Kachel, D. (1993). Document delivery and school libraries. Wilson Library Bulletin.

[47] Kessler, S. I., & McKenna W. (1978). Gender: An Ethnomethodoloeical Approach. New York: John Wiley and Sons.

[48] Klatt, R. (2001). Barriers in using digital scientific information at German universities and other higher education institutions. Lecture at the 23rd DGI-Online conference 2001,

[49] Leach, Fiona (1998). Gender, Education and Training: An International Perspective. In Gender and Development 6,2. (pp. 9- 1 8)

[50] Manda, P. A. and Mulkangara,F (2007). Gender analysis of electronic information resources use : A case of the university of Dares Salaam Tanzania. University of Dares Salaam Library Journal, 9 (1), 31-52

[51] Marchionini, G. & Maurer, H (1995). The role of digital libraries in teaching and learning.. http://ils.unc.edu/march/cacm95/sub8.html (accessed on 3 June 2005).

[52] Megarry, **J.** (1984). Introduction: Sex, Gender and Education. In Sandra Acker et al. (Eds.) World Year Book of Education. New York: Nicholas Publishing Co

[53] Mehta, G. (2000). Science and technology. In: Bourne, R., (Ed.) Universities and development. London: ACU.

[54] Njuema, D. L (1993). An Overview of Women's Education in Africa. In J. K. Conway and S. C. Bourque (Eds.), the Politics of Women's Education: Perspectives from Asia Africa and Latin America. (pp. 123-13 1) USA: University of Michigan Press.

[55] Obaje, M.A., & Camble, E. (2008). Use of CD-ROM database by staff and students in the University of Jos, Library. The Information Technologist, 5(1), 1-18

[56] Odora Catherine (1993). Education African Girls in the context of Patriarch and Transformation: A Theoretical and Conceptual Analysis. Stockholm: Institute of International Education. Sweden: Institute of International education, Stockholm University.

[57]   Oduwole, A.A. (2003). Electronic services provision in Nigerian university libraries. Nigerian Library and Information Science Review, 20(1&2), 1-7

[58]   Olatokun, W. M. (2008). Gender and national ICT policy in Africa: Issues, strategies, and policy options. Information Development 24(1).

[59]   Oliver, R.C (2002) The role of ICT in higher education for the 21st century: ICT as a change agent for education,. http://elrond.scam.ecu.edu.au/oliver/2002/he2 1.pdf (accessed on 23 June 2009).

[60]   Ozoemelem, O.A. (2009). Use of electronic resources by postgraduate students of the department of library and information science of Delta State University, Abraka, Nigeria. Library Philosophy and Practice. Retreived October 2009 from http://unlib.unl.edu/lpp/lpp2009.htm

[61]   Reiner, L., & Smith, A. (2008). The JAL guide to the professional literature. The Journal of Academic Librarianship, 34(2), 174-181

[62]   Robertson, Claire (1985). A Growing Dilemma: Woman and Change in African Primary Education, 1950-1980**.** In Gideon Were (Ed.), Women and Development in Africa. Nairobi: Gideon Were Press.

[63]   Rosina Agyepong (2001),Gender and African Education: A Critical Analysis of the Literature Sociology and Equity Studies in Education Ontario Institute for Studies in Education of the University of Toronto

[64]   Sharifabadi, S. R. (2006). How digital libraries can support e-learning. The Electronic Library 24(3).

[65]   Shujaa, M. J. (1994)**.** Tm Much Schooling Too Little Education: Paradox of Black Life in White Societies. Trenton, NJ: Africa World Press.

[66]   Steady, Filomina C. (1987). African Feminism: A Worldwide Perspective. In Rosalyn Terborg-Penn, Sharon Harley and Andreas Benton Rushing (Eds.), Women in Africa and the African Diaspora. Washington D.C.: Howard University Press.

[67]   Stella Anasi *(2012) Digital Libraries and Higher Education in... (PDF Download Available)*. Available from:
https://www.researchgate.net/publication/285478572_Digital_Libraries_and_Higher_Education_in_Nigeria_in_21st_Century [accessed Apr 26 2018].

[68]   Steinerova, J. &Susol J. (2007) Users information behavior- a gender perspective. Infor. Res. 12 (13). Available at http://www.information.net/ir/12-13/paper.320.html.

[69]   Sweetman, Caroline (1998). Editorial Gender and Development 6 (2) 2-8.

[70]   Sylvester Ozioma Anie (2011) The Impact of Gender on the Use of the Digital Library at the University of Ibadan Library Philosophy and Practice 2011 ISSN 1522-0222 http://unllib.unl.edu/LPP/

[71]   Tella, A., & Mutula, S.M. (2008). Gender differences in computer literacy among undergraduate students at the university of Botswana: implications for Library use.

[72]   Thome, B. (1993). Gender Play. Girls and BOYSin School. New Bmnswick, **NJ:** Rutgers University Press.

[73]   Wallace, R.; Krajcik, J. & Soloway, E. (1996) Digital libraries in the science classroom: An opportunity for inquiry. D-Lib Magazine,. http://www.dlib.org/dlib/ September 96/ Umdl/09 wallace.html (accessed on 23 June 2008).

[74]   Waters, D.(2001), Developing digital libraries: Four principles for higher education. Educause Review, September/October, 59.

[75]   West, C. and Zimmerman, D. H., (1 993). Doing Gender. In J. Lorber and S. A Farrell (Eds.) the Social Construction of Gender, (pp. 13-37). Newbury Park, California: Sage.