ACADEMICS' WORK RELATED STATUS AND ICT SKILLS ACQUISITION OF BIOLOGY

BY

MARY BILLY
DEPARTMENT OF MICROBIOLOGY
FACULTY OF SCIENCE
AHMADU BELLO UNIVERSITY, ZARIA

ABSTRACT

University education in Nigeria is aimed at producing high level manpower to cater for the various sectors of the country's economy. It is expected to contribute to national development by intensifying and diversifying its programs for the development of high manpower needs of the nation and making professional course contents to reflect our national regiments. For university teachers to carry out their job efficiently and effectively especially in this age of knowledge-based technology and globalization, the use of information and communication technology (ICT) becomes imperative. Interestingly, universities all over the world are rapidly incorporating information and communication technology (ICT) into all facets of teaching, research and management. ICT has impacted on every sphere of academic activity, ICT presents an opportunity to provide value-added information services and access to a wide variety of digital based information resources to their clients. Gender and age as a possible factor influencing the use of electronic information resources and ICT, has been widely identified in the literature.

KEY WORDS: male, female, academic staff, ICT skill acquisition, Biology, Akwa Ibom, State based Universities.

Introduction

Universities educate future leaders and develop the high-level technical capacities that underpin economic growth and development (Odekunle, 2001). Ibukun (1997) posited that the main purpose and relevance of university education in Nigeria is the provision of much needed man-power to accelerate the socio-economic development of the nation. Higher education is regarded as an instrument of social change and economic development. According to Ibukun (1997), the main objective of the National University Commission (NUC) is to ensure the orderly development of university education in Nigeria, to maintain its high standards and to ensure its adequate funding.

According to Fasanmi (2005), teaching staff are role models in and outside the University. Students look up to them and naturally imitate their mannerism, values and disposition. Makinde (2005) wrote that teachers leadership consist of living as a role model, giving the school direction, having an overview of school activities, setting standards and making "tough" decisions. Teachers influence on curriculum and schools system is enormous. They control "not only the rate at which any changes might take place but also largely determine the nature of the curriculum. Teaching should be done in such a way that learners cultivate the ability to think creatively and be self-reliant.

Ugwu (2005) said that teachers seem not to have demonstrated competence in instilling this creative ability in the learners at any educational level in Nigeria. Some faculty members may even be responsible for stifling innovation. Man generally opposes change and view change as a threat to established comfortable position. One major objective of tertiary education in

Nigeria is to "acquire both physical and intellectual skills which will enable individuals to be self-reliant and useful members of the society" (NPE, 2004). Self -reliance predicates on ability to be innovative and creative. In other words creativity and innovation is implied in our national objectives for tertiary institutions. If the demand is placed on our institutions to produce creative citizens, teachers must be creative. Expatiating on this aspect of education, Bourner and Flowers (1999) wrote that higher education is not limited to developing critical faculties, education is balanced when creative faculties is also developed. It is doubtful if teachers in our higher institution demonstrate this important trait. According to Ojedokun and Owolabi (2003), teachers in the developing world will have to change their teaching styles and acquire Internet skills as new technologies transform classrooms over the next 20 years. Teachers will need to learn new skills to teach students how to search for and use information from the Internet safety issues. Internet's seemingly infinite information offers access to up-to-date research reports and global knowledge so it has become an important component of electronic services in academic institutions (Nwokedi, 2007). Therefore, the Internet has become an invaluable tool for learning, teaching and research (including collaborative research) in Nigeria. Universities have facilitated and contributed to societal development. There is therefore the need for teachers to acquire innovative resources that will enable them carry out their functions effectively. One of such innovations is ICT skills.

Statement of the Problem

The social and educational climate around the globe is creating a paradoxical situation for many lecturers, who need to become lifelong learners themselves in order to facilitate the learning of others. There is pressure on academic staff to respond to changes produced by the increasing globalisation of education markets, and the capacities of Information and Communication Technologies (ICTs) to transform the ways education is delivered. This presents a serious challenge for many academics whose own formative educational experiences and professional orientations were shaped under different circumstances. This is most apparent in relation to the capacity for information and communication technologies (ICTs) to change the way education is delivered.

The advances in electronic based information and communication technologies (ICTs) have rapidly transformed the social and economic conditions across the globe which has brought a great improvement in the educational sector. This has provided new tools for enhancing access to information and knowledge management as well as sharing. The internet which is one aspect of this transformation has made a dramatic impact on our society, particularly in the field of education. Therefore this study seeks to demonstrate how ICT skills acquisition among Biology academic staff in Akwa Ibom State based Universities is influenced by the such teaching staff status as age and gender.

Objective of the Study

The main objective of this study is to determine Academics' work related status and ICT Skills Acquisition of Biology in Akwa Ibom State based Universities, while the following are the specific objectives of the study:

1 To determine how male and female academic staff in Akwa Ibom State based Universities differ in their ICT skill acquisition in Biology.
2 To find out whether younger and older academic staff in Akwa Ibom State based Universities differ in ICT skill acquisition in Biology.

Literature Review

System Theory by Buckley (1967)

In an ideal system there are three major components; input, process and output. According to Buckley (1967) in Umoh (2000), inputs, are all elements that enter the system across its boundary; inputs enable the components to interact or affect the ways in which the components interact in fulfilling the system purpose.

In the school system, inputs are the students, staff and materials that interact to carry out the function of teaching learning. High quality learning will take place in a classroom where the teacher's relationship with his students is non-threatening, cordial and loving (Thompson, 2001). According to him, Learning in such an environment will definitely be better than learning in an atmosphere where the teacher abuses. Better quality learning occurs where suitable audio-visual materials, adequate and well-equipped classrooms, laboratories and libraries are available. The success of any school could be determined by the performance of the students.

Rudolf (2011) was concerned with human behaviour patterns within the social system. The social system theory refers to the reciprocal social behaviour of individuals within a system. It presupposes the interdependence of various units of a school organization as in education where teachers and students exchange knowledge, skill and research for the benefit of one another. The emphasis is on how people attempt to influence one another. For example, in the classroom, the teacher projects an idea to the students, a student sees, hears, feels this projection and reflects on it. The teacher in turn evaluates the reflections and acts upon it. The teacher may conceive the students what his action is or make it to suit with what the students reflected. It is as a result of this active exchange people come to know who and what they are.

The implication of social system theory on education is that the school as an educational institution is a social agency created for the education of the young people. The educational system is being challenged to change as innovative technology changes, and as new generations of students pass through with new expectations and new needs. Leadership in IT requires many of these characteristics common to all leaders, but also requires special abilities and insights into technology's impact. A teacher's ICT skill is thus paramount to students' academic performance.

Gender and ICT Skill Acquisition

There is a systematic social and cultural stereotype that believes men and women should have the same experiences for conditions and situations. However, studies have shown that men and women tend to experience things (media, technology and communication inclusive) differently (Robin, 2004). Hence if these experiences are not analyzed and addressed, women and indeed female academics in various Universities might not adequately participate in and maximize the use of both media and ICT facilities provided by the University. Literature reviewed has confirmed the background that women are not likely to access and use ICT and media the same as men.

The question of communication and technology depends largely on quality and quantity of access and ownership; as access, ownership and the creation of knowledge is the key and central for effective academic functioning in a University. The need to access, control and create knowledge within the context of the emerging technology is essential to the development and progression for women academics. This is because knowledge production, a key function of the

University and, which also is within the realm of ICT, is controlled by unequal power dynamics of socio-economic realities of globalization with gender affecting the form. Thus, women must not only access and use the media and ICTs, but must also produce and control the knowledge, which they access from the media and ICTs.

Huyer (1999) and Robin (2000) note that most of the positive effects of the information revolution has so far bypassed women, because the information highway is predominantly male-oriented and often a forum for gender discrimination, intimidation and even harassment. In a similar vein, Fontaine (2000) highlights that there are psychological, educational and economic barriers relating to the perception of technology as a male domain. Hence there is an overall lack of confidence in training, usage and mastery of these technologies including information technologies, resulting in women feeling intimidated and, thus, resisting the learning and usage of same. While discussing barriers to access and use of the new technologies to both men and women, Huyer (1999) advanced that the cost of equipment, online access, lack of training, technical information and computer parts and repairs affect both gender. Nevertheless, she pinpointed that the situation is worse for women because of their lower economic and social status, lack of training and autonomy and time.

Lucus and Murray (2002) concurred that the educational system is being challenged to change as innovative technology changes then interaction with information and knowledge and as new generations of students pass through with new expectations and new needs. According to Debra (1999), today's education world is information and communication intensive, and IT professionals and the entire faculty in the context of this study need to be empowered with the knowledge, skills and abilities that technology offers. Even with the enormous potential and academic advantages that innovation and improvement of communications afford, without the direct participation and support of an institution's leadership, this power cannot be pushed to its full potential. Leadership in IT requires many of then characteristics common to all leaders, but also requires special abilities and insights into technology's impact.

With the evolution of ICT, the delivery of education and training by faculties/academics is changing. Rapidly, ICT is affecting the way university education research are conducted and delivered. They are currently being used effectively in higher education for information access and delivery in libraries, for research and development, for communication and for teaching and learning (Jacobsen, 1998). The drive for engendering the ICT environment dates back to the Beijing Declaration and Platform for Action (PfA), adopted by the Fourth World Conference on Women in 1995 (UNGASS, 2000). Much literature described faculties in higher education as comfortable using technologies such as word processing, email, and web searching (Vannatta, 2000), but not comfortable integrating technology into their classroom practices for meaningful learning (Ropp and Brown, 2000). The issues of best practices in the innovative use of technology and integration among higher education faculty are not clearly focused and results of research in this area vary widely indicating the need for additional research (Kozma, 2003).

A better understanding of the concept of gender could be gained in social psychological literature where the physical, mental and social differences of men and women have been discussed. Furthermore, findings of some empirical studies have shown that differences could manifest in the patterns of male and female use of ICT and electronic resources. For example, Fisher et al. (2005) studies have shown that research of human information behaviour addresses questions of different cultural and social contexts, work tasks, domains, or information grounds. Similarly, Steinerova and Susol (2007) assert that gender as a cultural and social construction of a personality can be manifested in qualities and behaviour of men and women. Lending credence

to this assertion, they have reported that women use the Internet slightly less than men; they show higher proportion of rare use and non use of electronic resources and a lower proportion of frequent use. However, the study by Alshankity and Alshawi (2008) which examined the gender differences in Internet usage among faculty members in Saudi Arabia did not see a significant gender difference in the overall Internet usage. The gender differences in the use of electronic resources observed between male and female also reflect in the use of computer technology. For example, Enochsson (2005) has shown that the socio-cultural background of gender still leaves women with more computer anxiety and feelings of lower self efficiency.

Age and ICT skill Acquisition

Academic staff differ in their utilization of ICT applications according to their ages. The design of older academic staff training system has to be carefully planned, as it has been reported that: adult staff between the ages of 27-35 have special characteristics and traits towards ICT skill acquisition (Jimoyiannis and Gravani, 2010) and older people's training on ICT applications takes longer and is harder (Themistocleous, 2010). In contrast, Edwards (2006) said older academic staff are familiar with ICT-based learning and increasingly express their interests to use technologies for learning purposes. Bubolz-Lutz (2004) points out that already 8% of persons 60 years and older learn by using media applications. Moreover, there is an increase in the average age of the economically active population in the EU. Over the next 10 years the age structure of the population of working age will change significantly: those aged 2029 will fall by 9 million (2 17%), whereas the numbers of persons aged 5059 will grow by 5.5 million (1 12%) and the 6064 age group will grow by 1 million (European Commission, 1996).

In addition, the growing importance to develop more suitable learning settings for older persons is even more pervasive, considering the continuously increasing number of people participating in e-learning activities as well as the changing learning settings at the workplace (Neville, 2004). There is a constant pressure in the academic sector to keep the know-how up-to date, to enhance skills. Most training of these learners therefore is focused on training activities cantered around work related issues. These academic staff as described by Modebelu and Onyali, (2011) are group of individuals that are employed in the universities and other tertiary institution to train and groom students through higher level manpower training needs. They are generally categorized into male and female and of different ages. They are professional whose duties are to teach, instruct, train, educate and facilitate knowledge, learning and performance. As experts and professionals, these staff is expected to be versatile, creative, resourceful and innovative. But inspite of the characteristics of these staff, it has been noted that the academic staff has not been able to produce or turn out quality graduates as much as expected of them due to their inability to utilize new technologies in teaching and up-dating of lesson resources.

Modebelu et al (2013) rightly pointed out therefore that both the younger and older academic staff are expected to utilize their expertise online training to ensure the achievement of quality in their teaching that will in turn help to achieve the set goals of students. An empirical study by Kwacha (2007) examined the use of electronic information resources and research by the academic staff in three private universities in Ogun state, Nigeria. The research looked at the extent with which electronic information resources were used in the universities, questionnaires were distributed to the respondents at the three universities and a valid number was retrieved and analysed. It was found that younger academic staff between the ages of 27-35 was more exposed to the use of ICT than the older staff.

Conclusion

While the developed nations, on one hand, are doing all they can to maintain their leadership position in constructive information usage, the developing nations, on the other hand, are trying all they can to bridge the prevailing digital divide. Online information constitutes one of the major global sources of information being tapped by schools, nations and individuals. ICTs are the vehicles that are being used to harness online resources and they have so changed the world that, the world as it is now, could aptly be described as a 'global village'

Recommendation

The following are recommended:

1. Management of universities should encourage both male and female lecturers to participate in ICT training programs. Acquisition of ICT skills from such training programs would help to improve lecturers' job efficacy and this would lead to high productivity.
2. The management of universities should ensure that academic staff offices are provided with ICT facilities and also connected to the internet. This would enable the lecturers to access and download information or materials quickly and easily for lecture preparation, teaching, research and other allied duties. This would enhance lecturers' job efficacy.

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