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Obstacles to the Domestication of ICT in Humanities Education in Nigeria

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Introduction

In today's competitive global economic environment, information and communication technology (ICT) is becoming a widely accepted tool for multi-faceted development. In view of the flexible services it offers, the new digital technology avails opportunities to revolutionize the traditional system of education. Concerns over educational relevance and quality co-exist with imperatives for expanding educational opportunities in higher education. To revamp the educational system, there is the need to produce a technologically literate workforce with positive disposition to technology use and reasonable competence of performing in a borderless knowledge-based economy. According to UNESCO (2002), cited in Owhotu (2006), ICT is a term used to describe the tools and the processes to access, retrieve, store, organize, manipulate, produce, present and exchange information by electronic and other automated means. These means include hardware, software and telecommunication in the form of personal computers, scanners, digital cameras, phones, faxes, modems, CD and DVD (digital view disc), players and records, digitalized video, radio and TV programmes and multimedia programmes.

ICT has been proved to be a very important aspect of the teaching and learning process. It plays a significant role in development efforts as they open up new opportunities for progress, the exchange of knowledge, education and training and for the promotion of creativity and intercultural dialogue. These technologies can also help to strengthen social cohesion and reinforce the capacity development for humanities education. Higham and Macaro (1993) conceptualize a broad outlook to gainful education that occurs through the medium of the

internet on both static and interactive websites. They indicate that some technology-related activities in humanities education include the use of:

- Broadcast;
- Micro-computer with appropriate keyboards and other devices to teach literacy and writing;
- Keyboards, effects and sequencers in music teaching;
- Devices to facilitate communication for students with special needs;
- Electronic toys to develop spatial awareness and psycho-motor control;
- E-mail to support collaborative writing and sharing of resources;
- Video-conferencing to support teaching of modern foreign languages;
- Internet-based research to support geographical inquiry;
- Integrated learning systems (ILS) to teach basic literacy;
- Communication technology to exchange administrative and assessment data.

The experience of introducing different types of ICT in humanities education classrooms and other educational settings all over the world over the past several decades suggests that the full realization of the potential educational benefits of ICT is not automatic. Jung (2005) asserts that combining ICT with effective pedagogy could be a daunting experience for some institutions since effective integration of ICTs into the educational system is a complex multi-faceted process that involves not just technology. He concludes that if it is not well adopted and domesticated in schools, educators may view the use of ICTs for curriculum delivery as an add-on and not an integral part of teaching and learning. There is, therefore, the need to understand the barriers that affect the processes through which teachers integrate ICT in teaching to the point where technology becomes spontaneously domesticated into teaching and learning process in the humanities classroom.

ICT in the Nigerian Context

Studies have examined the prospects of the use of ICT, especially the application of computers to pedagogical work and practice in humanities education (Umeh 2000; Ruthven-Stuart 2003; Maduekwe 2006; Tinio 2007; Kwache 2007). ICT offers one of the greatest challenges of our time and organizations, especially educational institutions, have found its usage valuable. Such advantages that may accrue to both lecturers and students alike in the use of ICT range from providing lecturers with an efficient and effective language tool (Maduekwe 2006); taking care of students' individual differences (Kwache 2007); making the lessons interesting, easier and more fun (Appoh 2007); and, providing administrative support to lecturers (Anderson 2004).

Davis (2002) and Cronje and Conza (2002) contend that if universities are to compete in global higher education development, they must embrace the technological advancements and use them as a strategic tool, capable of transforming educational practices. Such practices are achievable with technologically literate and critically-thinking workforces who are prepared to participate fully in the global economics. Highlighting the role of ICT in higher education, Yusuf (2005) confirms that institutions across the world have been adopting ICT in an effort to create an environment for both learners and their instructors to engage in collaborative learning and gain access to information. Ololube (2006) add that access to information through ICT increases the information accessible to individuals. This will support them in trying new strategies, thinking and creativity that are reflective in practice aimed at engaging them to new innovations through the use of ICT. Akudolu (2004) is of the opinion that ICT devices and programmes can facilitate and enrich the quality of teaching and learning in humanities classrooms in the areas of listening, speech work, reading and writing. However, to Jegede and Owolabi (2005) it appears that some of the ICT facilities are not sufficiently provided for teaching and learning processes. According to them, this is one of the reasons why some lecturers do not use some of the facilities in teaching.

In studies carried out (Jegede and Adelolu 2003; Bamidele 2006), it was concluded that the use of ICT facilities for teaching and learning (in humanities education) involves various methods which include systematized feedback system, computer-based operation network, video conferencing and audio conferencing, internet, compact disc (CD-ROM) and assisted instruction. Okebukola (2000) succinctly asserts that the effective use of the various methods of ICT in teaching will, to a large extent, depend on the availability of the ICT facilities and the teachers' competence in using them. He opines that higher education institutions should not be influenced by features and functionality of software but rather focus on ICT as a tool to support teaching and learning. Besides, technology should not drive education; rather, educational goals and needs must drive technology.

Recent changes in Higher Education have brought about a cultural shift and led to a review of and reflection about pedagogy (Rajesh 2003). Part of this reflection centres on the move towards widening participation, addressing issues involved in accommodating greater numbers and a greater diversity of students into skill-oriented pedagogy. Ever increasing class sizes, modular frameworks, lifelong learning and an emphasis on skills development have been underpinned by the introduction of student-centred learning and an increasing use of the internet, computers, video, and other technologies as learning vehicles to deliver the educational experience. These changes are visible in subjects that make up the humanities, such as history, languages and philosophy, which involve the study of

culture and ideas, as distinct from the sciences. In fact, it is virtually impossible to escape ICT in almost any facet of life, and humanities education is no exception. An advantage for teachers is the opportunity to use ICT to encourage and enable students to take responsibility, thus enhancing the ability to complete a task and deal with the issues involved in the process.

Humanities Education and ICT

According Eastman (2007), the last two decades have witnessed a proliferation of computer technologies in humanities education. The term ‘humanities’ comes from the Latin word *humanus*, which means ‘human, cultured and refined’. Currently, humanities is a loosely defined group of academic subjects united by a commitment to studying aspects of the human condition and a qualitative approach that generally prevents a simple paradigm from coming to define any discipline. Unlike other subjects, it is not a group of scientific or technical subjects. The humanities are the stories, the ideas and the words that help us make sense of our lives and our world. Humanities education helps to introduce us to thoughts about life and what to do to make life better. By connecting us to other people, they point the way to answers about what is right and wrong or what is true to our heritage and history. The humanities help to address the challenges we face together in our families and our communities as a nation. As a field of study, humanities education emphasizes the analysis and exchange of ideas rather than the creative expression of the arts or the quantitative explanation of the sciences. The compendium of disciplines of the humanities includes:

1. History, Anthropology and Archaeology – the study of human, social, political, and cultural development;
2. Literature, Languages and Linguistics explore how we communicate with each other and how our ideas and thoughts on human experience are expressed and interpreted;
3. Philosophy, Ethics and Comparative Religion consider ideas about the meaning of life and the reasons for our thoughts and actions;
4. Jurisprudence examines the values and principles which inform our laws;
5. Historical, Critical, and Theoretical Approaches to the Arts reflect upon and analyze the creative process;
6. History, Theory and Criticism of the Arts;
7. Aspects of the Social Sciences which use historical or philosophical approach;
8. Humanities – general and interdisciplinary.

These academic disciplines or subjects deal with human values, perceptions, feelings, attitudes and the like. The teaching of the humanities is intended to make students realize that the mere possession of knowledge is useless unless it is put to useful ends. Humanities education, therefore, is the instrument for helping the individual to build lasting societal and personal values, the knowledge and skills needed to become productive and responsible members of the society. In humanities education, therefore, we see the development of the whole person, which is the goal of present-day education. A humanist is one who is able to think critically, solve problems, take rational decisions and contribute meaningfully to society.

There is, at present, a groundswell of interest in how computers and the internet can best be harnessed to improve the efficiency and effectiveness of humanities education at all levels. Some of the major activities and characteristics of humanities are participation in debates, discussions, reading, independent study, critical thinking and research. It is evident that ICT–enhanced learning encourages learner participation and cooperation among students, promotes team spirit, critical thinking and enhances global awareness and much-desired communicative skills. Since the four language skills have an important place in humanities education, adult learners as much as young students can build their communication and interpersonal skills as they use ICT tools to speak, discuss, respond to questions, listen to speeches, etc. The preparation and delivery during such activities can help in fostering critical thinking, self-confidence and assurance, in addition to comprehension skills.

These methods could be supported with such tools as films, slides, video clips, projectors, e-mail, discussion forum, DVD and television programmes. Technology profoundly affects learning and teaching in the humanities as well as the nature of humanities. In most cases as well, traditional materials such as the textbook and chalkboard, and technology such as laboratory equipment, radio, film, projectors and computers have been used to support classroom teaching. All in all, the use of technology to support classroom teaching does not radically change the teaching method. Rather, the teacher remains the key player in determining which, when, where and how to integrate these learning technologies in the humanities classroom.

Theoretical Underpinning and Assumptions: Theory of Domestication

The theoretical underpinning for this present study is based on the Theory of Domestication as propounded by Chigona, Chigona, Kayonago and Kausa 2010; Alampay 2006; Frissen 2000; and Pelgrum 2001). The definition of this and other related terms follows in the next section.

Domestication Paradigm

According to the above-mentioned authors, 'domestication' can be described as the process of technology adoption into everyday life. The framework looks beyond the adoption and use of ICT (as well as gratifications or benefits) to asking about what the technologies and services mean to people, how they experience them and the roles that these technologies can play in their lives. The processes observed in this framework are concerned with how individuals encounter technologies and deal with them, sometimes rejecting them and at other times accepting them (Rogers 2003).

The domestication paradigm was devised by Chigona, Chigona, Kayonago and Kausa (2010). According to them, domestication consists of three main processes, namely: Commodification, Appropriation and Conversation. Some researchers split the appropriation stage into Objectification and Incorporation stages, thus coming up with four stages (Frissen 2000). This study adopted the four-stage process of domestication. Commodification refers to the way a technological product is designed and is given an image by the users as it emerges into the public space. At this stage, symbolic and functional claims about the product are noted. The product is evaluated on how well it would satisfy the teachers' perceived needs (Warschauer 2004). In the case where the teacher has the choice of adopting, the commodification process may affect his/her decision to acquire the product. Once purchased by an individual or an organization, the product or object goes through a process of 'appropriation'. At this stage, the product is possessed by the owner and becomes authentic. When looking at appropriation, the objectification process is considered to examine how the product finds space and enters the geographical area of the owners. Objectification does not necessarily mean the product is accepted by the potential adopters. The product is then incorporated into the daily routines of its owners. Incorporation begins by first integrating the product in temporal structures both formally (in the work schedules) and informally (in the routines and habits).

In the conversion stage, the adopters of the innovation show their adoption by displaying it to the outside world, physically or symbolically (Habib 2004). In the case of ICT for curriculum delivery, the display could be by individual teachers within a school environment or by the entire school as an adopter displaying to other schools. The first two stages of the domestication process are equivalent to what is normally referred to as adoption in most adoption frameworks (Pedersen and Ling 2003). Thus, it is noted that the domestication framework allows for investigating the processes beyond the acquisition of the technology. The domestication framework has been used to study the adoption processes of a variety of technologies, including personal computers, televisions and mobile phones (Pedersen and Ling 2003). Again, it should be noted that although the framework is mainly used to study person or household adoption of technology,

others recommend that it can also be used to study organizational domestication of technology. In this chapter, we employed the domestication framework as the lens to understand the perceived obstacles impinging on domesticating ICT in the pedagogy of humanities education in Nigerian universities.

Research Problem

There is urgency regarding the improvement of the quality of humanities education. ICT is perceived as a necessary tool for this purpose. Adeoye (2009) notes that ICT requires teachers to be committed to a constant and changing learning curve which may involve a mixture of formal and less formal techniques if they are to acquire and develop the skills needed to be effective ICT users. However, he laments that many university lecturers still find it difficult to be potential ICT users, given the difficulties they face. In support of this notion, Webber (2003) notes that globally, there are major obstacles to the domestication of ICT in humanities education which cut across all levels and is still not well addressed. The urgency of action in this regard has become even more imperative, considering the impact of globalization and the rapidly expanding role of knowledge, information and communication technology and the interface between education, society, economy, culture and technology (UNESCO Draft Programme and Budget 2002-2003).

Purpose of the Study

This study therefore sought to determine the perceived obstacles to the use of ICT in humanities education. Secondly, the study aimed at establishing if the obstacles involved vary in different universities.

Research Questions

To achieve the objective of this study, the following research questions were posited:

1. To what extent do health, psychology, power, socio-economic, training, attitude, cultural, political, personal, economic and technical factors militate against lecturers' use of ICT in teaching at the sampled universities in Nigeria?
2. Do these obstacles/barriers vary from one university to another?

Methodology

The study adopted a descriptive survey research design to find out the obstacles to the domestication of ICT in Nigerian universities. The participants in this study were lecturers from four Nigerian universities – two from the south-western Nigeria and two from the south eastern Nigeria. These universities are: University

of Lagos, Akoka, (Univ A), Lagos State University, Ojo (Univ B), University of Nigeria, Nsukka (Univ C) and Ebonyi State University, Abakaliki (Univ D) which were randomly selected from south-west and south-eastern States of Nigeria. We shall be referring to these universities as University A, B, C, and D. Lecturers were selected from the various faculties in these universities via a simple random sampling technique. Sixty lecturers were sampled in each university, giving a total of two hundred and forty (240) respondents.

The major instrument employed in collecting the data for this study was an open type questionnaire, supported with an unstructured interview session. The questionnaire comprised 20 items and each item was structured on a four-point Likert scale, ranging from a score of 1 to 5 (where 1 = strongly disagree and 4= strongly agree). Two lecturers of computer technology and two lecturers in humanities education scrutinized the items of the scale to ascertain their content validity. Their observations and comments were given due consideration, hence the number of items was reduced from fifty two to forty-nine before the final draft. Using the test- re-test procedure, the final draft of the questionnaire was pilot-tested on a group of lecturers (N= 25) teaching in one of the nearby universities but not within the schools selected for the study. The Cronbach coefficient alpha of the instrument obtained was of 0.768; and so the questionnaire was considered adequate for the study.

The study utilized descriptive statistics such as frequencies, percentages, reliability tests and Analysis of Variance (ANOVA).

Results

The results of the data analysis, indicating the mean of all variables hindering the domestication of ICT in humanities education, are shown in Table 15.11.

Research Question 1: To what extent do health, psychological, power, socio-economic, training, attitude, cultural, political, personal, economic and technical factors militate against lecturers' use of ICT in teaching at the universities?

To analyze the research question above, Arithmetic mean was used after rating each response on a 5-point basis. Results are shown in Table 15.1.

Table 15.1: Respondents' Views on Factors Militating Against the Use of ICT by University Lecturers

Factors / Barriers	Mean of Responses	Ranking of Barriers
Health	2.248	5 th
Psychological	1.866	9 th
Electricity (Power)	3.158	1 st
Socio-economic	2.255	4 th
Training	2.125	6 th
Attitude	1.353	11 th
Culture	1.460	10 th
Political	2.507	3 rd
Personal	2.094	7 th
Economic	2.815	2 nd
Technical	Technical	8 th

Table 15.1 shows 11 factors that are militating against lecturers' use of ICT in the universities and indicates the degree of seriousness of the barriers. The most disturbing factor is irregular power supply which pooled the highest mean score (3.158) out of a maximum of 5. This translates to over 63 per cent of the respondents complaining about this factor. The next serious factor is economic which pooled or recorded 2.815 as mean score that translates to over 56 per cent of the respondents. Other factors have different degrees of seriousness in militating against lecturers' use of ICT in teaching except attitude (1.353), culture (1.460) and psychological factors (1.866) do not have any serious effect on lecturers' use of ICT in the universities.

Research Question 2: Do the factors / barriers vary from one university to another?

Table 15.2: The Mean Average Factors Militating Against Lecturers' Use of ICT for Teaching in Different Universities

Factors	UNILAG (UNIV. A)	LASU (UNIV.B)	EBSU (UNIV.C)	UNN (UNIV.D)
Health	2.1944	2.1298	2.5529	2.1142
Psychological	1.1620	1.8846	2.7115	1.7068
Power	3.1759	2.9599	3.5000	2.9954
Socio-economic	2.1528	2.2548	2.5577	2.0556
Training	2.5231	2.1795	1.6442	2.1528
Attitude	.9031	1.5449	1.7215	1.2420
Culture	1.1194	1.8192	1.4567	1.4444
Political	2.1093	2.0740	3.2315	2.0926
Personal	1.6562	2.2660	2.5147	1.9401
Economic	2.3951	2.6603	3.4551	2.7500
Technical	1.6204	2.2067	2.9471	1.5833

Table 15.2 shows the Arithmetic mean scores of the ratings of the factors militating against lecturers' use of ICT for teaching in different universities. The table shows that power is a dominant factor militating against lecturers' use of ICT in all the four universities, as it ranked first in each of them. The degree or level at which the other factors affect lecturers' use of ICT vary from one university to the other. For instance, in Univ.A, the second serious factor is Training (2.5231); in Univ. B, Univ. C and Univ. D, it is Economic (2.6603, 3.4551 and 2.75 respectively). This implies that while the lecturers in the other 3 universities see the economic factor as an issue, at Univ. A, training, rather than the economic factor, is the issue. The least important factor in lecturers' non-use of ICT at Univ. A, Univ. B and Univ. D is attitude, while in Univ. C, it is culture. Table 2 also shows that technical (2.9471) and psychological (2.7115) factors are considered as serious obstacles to lecturers at Univ. C, but they are not to lecturers in Univ. A and Univ. D.

In summary, by examining the means for all factors per university collectively, it was observed that factors that have the greatest effect on lecturers are found at Univ. C followed by Univ. B, then Univ. A and Univ. D.

Discussion

This study investigated the nature of barriers hindering the domestication of ICT in the humanities education unit in Nigerian universities. The results reveal that four major variables – power, economic, political and socio-economic factors ranked highest and combined among the obstacles affecting lecturers' domestication of ICT in humanities education. However, other factors are slightly significant. It is evidently clear that in the four universities – Univ. A, B, C and D – the power factor ranked first as the most inhibiting obstacle in ascending order (3.158), followed by economic (2.815), political (2.507), and socio-economic (2.255); while other factors have different degrees of seriousness in militating against lecturers' use of ICT, with attitude (1.353), culture (1.460) and psychological (1.866) ranking least among the obstacles to the use of ICT in the sampled universities. Furthermore, the findings of the study indicate that erratic power supply is a major hindrance to lecturers' use of ICT, with the highest mean score of 3.158 out of a maximum of 5. This research finding is in consonance with earlier studies by Ushie, Beshel, Asanga and Inyang (2008); Akudolu (2002); Adomi (2005) and Osondu (2006), which asserted that erratic power supply by the Power Holding Company of Nigeria (PHCN) is a major constraint to the use of ICT in such a way that even where the facilities are available, use is impossible. Busari (2006) also confirms that a stable power supply reshapes a nation's economy and mentality towards ICT positively.

The results about the economic and socio-economic obstacles, which pooled 2.815 and 2.255 respectively as mean scores, are significant and potent as part of the reasons that often dictate lecturers' attitude towards acceptance, acquisition of knowledge and skills, integration and effective diffusion and domestication of computer technology in humanities classrooms. Implicitly, the economic and social-economic context of the institutions also affects ICT adoption. In an affluent setting like Univ. A, many lecturers have access to computers and the internet at home and therefore are comfortable with the use of technology within the school environment. In contrast, many institutions in disadvantaged areas do not have constant power supply, let alone ICT amenities at home, and are therefore less familiar with their use. Such lecturers have low propensity towards the use of computers. This finding is in consonance with Owhotu (2009) who notes that many states in Nigeria, especially but not exclusively the northern states, with low education indicators, are trying to expand the system at the same time as improving the quality and outcomes of the institutions. In these settings, the ICT output is low and the demand for skilled graduates is high. Salawu (2002) found that government policies as well do not make provision for adequate funds for

procuring ICT infrastructure in higher institutions. Hence, lecturers who see themselves as being computer competent and confident are favourably disposed to self-sponsorship.

Linked to this is the problem of limited resources which affects the domestication of technology negatively. Most of the institutions sampled suffer high student ratio which has discouraged some lecturers from incorporating ICT in their teaching and learning. This finding corroborates Udeani's (2006) assertion that adequate equipment, connection cost and population of students are generally excessive barriers for developing countries in Africa, South Asia, Latin America and the Caribbean.

Another major outcome of this study is the issue of health variable, which recorded a mean score of 2.248, as a serious contributory obstacle. This outcome indicates that, despite the re-assuring measures taken by some institutions, some lecturers have attributed various health problems to visual strain, frontal headache, mental fatigue, ruptured eye vessels, swollen hands and fingers. This finding coincides with previous findings by Baylor and Ritche (2002), Namlu and Ceyhan (2002) and Deniz (2007) who posit that headache, muscle strain, skin allergies and eye damage are all common health hazards to prolonged computer use.

The result of this study further reveals that politics significantly stands as an obstacle to the diffusion of Information Communication Technologies, with a mean score of 2.507. By implication, contextually different environments bring about different challenges in the implementation and utilization of ICT within pedagogical practice. For instance, in some states, ICT policy may not augur well for some institutions. In some institutions where there is a top-down management style with little consultation between levels, staff members may feel coerced into using ICT and therefore may not use it effectively. (Czerniewicz and Brown 2009). Lecturers may feel constrained by lack of institutional support and political will and may feel unsure of the direction they may take and the purpose the use of ICT is meant to serve. Furthermore, research has confirmed that institutional politics, vision and leadership provided in well-managed institutions enable lecturers to use ICT more productively than their counterparts in institutions which are not well managed politically (Czerniewicz and Brown 2009).

Findings of this study show that lack of adequate training is equally emphasized as the sixth serious barrier against lecturers being good users of ICT. The study also reveals that most lecturers prefer the traditional method of teaching which is the 'chalk-talk' method to using ICT. This finding is in line with the argument of Ikoro (2002), who states clearly that lecturers are so used to the traditional method of teaching and therefore see the introduction of ICT as time-consuming and sometimes unnecessary. In support of this notion, Auala (2003) and Owhotu (2009) note that institutions of higher learning in Nigeria have not taken up the challenge to professionally train their lecturers in ICT use, which is responsible

for the latter's indifferent attitude to the use of ICT. The professional development of lecturers sits at the heart of any successful technology and education programme. Baylor and Ritchie (2002) and Sofoluwe and Badmus (2004) conclude that professional development has a significant influence on how well ICT is embraced in the classroom.

Surprisingly, attitude, culture and psychology as variables, with a mean score of 1.353, 1.460 and 1.866 respectively, did not contribute much to the obstacles to the domestication of computer technologies. The reason for this is not far to seek because teachers may have the right attitude, but once the right support and infrastructure, such as physical space, furniture, electricity and internet connectivity are not available, it may be difficult to benefit from technology. This outcome thus negates previous research by Nwagwu (2006) who noted that if lecturers want to successfully adopt the use of technologies in their lectures, they must possess positive attitudes. An important factor in the implementation of ICT is the users' acceptance which in turn is influenced by their attributes and attitudes towards the media.

Recommendations

1. In order to revamp the humanities education system, there is need to produce a technologically literate workforce who are competent to rise up to the challenges of technological innovations. ICT must be given the necessary attention by institutions to ensure it is integrated and domesticated into our educational system.
2. Effective use of the various methods of ICT in humanity education will invariably depend on the availability of the ICT facilities and the teachers' competence in using them. Government at various levels should therefore equip teachers with the necessary tools, such as computers, computer laboratories, laptops and technical assistance that would enhance their computer literacy. Since frequent use of computers is an antidote for computer anxiety, humanities education should ensure that school laboratories are internet networked so as to encourage more teachers' access to computer technologies for the present and future use.
3. Teachers' professional development is a lifelong phenomenon. Like any other reform effort, the use of technologies cannot be achieved by a one-shot training course. As technology is changing very fast, teachers need to be updated with these changes in order to get positive results in humanities education.

Although humanity education programmes do not typically include technology training, it is now quite obvious that interactive and communication technology training needs to be compulsorily incorporated into the pedagogy to achieve the greatest educational impact and domestication.

Conclusion

This study has shown that despite the willingness of lecturers to integrate ICT into their teaching and learning processes, variables like power, economic, political, training and health issues in institutions make it difficult for a firm ground to be established for the domestication of ICTs in humanities education in the sampled universities. This implies that, in reality, access does not equate effective usage and the achievement of the desired impact. The proliferation of technologies has complicated the teaching-learning process; and so, finding the best ways of integrating technology into classroom practices is one of the challenges the twenty-first century teachers face. Furthermore, integrating and domesticating ICT into humanities education is much more complicated because of the different perspectives of the compendium of subjects and disciplines involved.

In this respect, teachers as sole implementers are expected to have knowledge, skills and positive attitudes towards the implementation of ICT in institutions of higher learning. We need to acknowledge that the success of implementation is more serious than just providing computers and securing a connection to the internet. According to Fullan (1991), the process of change implementation is planned along three stages, namely: adoption, implementation and institutionalization. Consequently, awareness of any obstacle that teachers face could lead to the development of solutions to the obstacles, useful training programmes and incentives for the use of ICT.

Overall, no single solution exists to address the immense challenges of ICT domestication in a second-language context. Perhaps, both teachers and trainees require ongoing support and opportunities to experiment with ICT skills and strategies in pedagogical innovation perspectives. Postman (1993) asserts that in our technicalized, present-centred information environment, it is not easy to locate a rationale for education, let alone impart ICT convincingly. To achieve the goal of humanity education, therefore, we need teachers and students who will understand the relationships between the techno and our social and psychic worlds, so that they may begin informed conversations about where technology is taking us (Warschauer 2003). This does not mean that ICT should replace the traditional method of teaching. Rather, effective domestication of ICT into the traditional method in the humanities will make room for a balanced outcome.

References

- Adomi, E.E., 2005, *Internet Development and Connectivity in Nigeria*, Retrieved on 28/01/2009 from: <http://www.emeraldinsight.com/insight/viewcontentserylet.filename=published/emeraldfulltextarticle/articles/2800390306.html>.
- Akudolu, L.R., 2002, 'Information and Communication Technology (ICT) Centered Education: A Necessity for National Development', *Nigeria Journal of Computer Literacy (NJCL)*, Vol. 3, p. 12.

- Akudolu, L.R., 2004, *Teaching the Language Arts*, Enugu: John Jacobs' Publishing, pp. 12-18.
- Akudolu, L.R.I., 2004, 'Comparative Analysis of the Effects of Computer-assisted Language Learning (CALL) and Conventional French Instruction (CFI) on Students' Performance in French Language', *International Journal on Information and Communication Technology* (December 2004), Volume 1, No.1 and 2, pp. 33-41.
- Adomi, E.E., 2005, 'Internet Development and Connectivity in Nigeria', Retrieved on 28/01/2009 from: <http://www.emeraldinsight.com/Insight/ViewContentServlet?Filename=Published/EmeraldFullTextArticle/Articles/2800390306.html>
- Alampay, E.A., 2006, 'Beyond Access to ICTs: Measuring Capabilities in the Information Society', *International Journal of Education and Development Using Information and Communication Technology*, Vol. 2, Issue 3, pp. 4-22.
- Appoh, J., 2007, 'Integrating Technology into the Process of Teaching and Learning', *Journal of Research and Development in Education (JORDE)* 7, pp. 129-135.
- Badmos, A.M., 2004, 'Computer Instruction: An Approach that Expedites the System of Education', *Nigeria Journal of Computer Literacy*, Vol. 5, no. 1, pp. 21-29.
- Bates, T., 2001, *National Strategies for e-Learning in Post-secondary Education and Training*, Paris: UNESCO, pp. 1-15.
- Baylor, A. and Ritche, D., 2002, 'What Factors Facilitate Teacher Skill, Teacher Morale and Perceived Student Learning in Technology Using Classrooms?', *Computers & Education*, Vol. 39, No. 1, pp. 395-414.
- Busari, T.O., 2006, 'Information and Communication Technology in Science and Technology Education', in V.B. Owhotu, ed., *An Introduction to Information Technologies in Education*, Lagos: Sibon Publishers, pp. 101-103.
- Chigona, A., Chigona, W. and Davis, Z., 2010, 'Motivating Factors: Educators' Use of ICT in Schools in Disadvantaged Areas in the Western Cape', International Conference on Information Management and Evaluation, University of Cape Town, Cape Town.
- Collins, B., 2002, 'Information Technologies for Education and Training', in H. Adelsberger, B. Collis, and J. Pawlowski, eds., *Handbook on Technologies for Information and Training*, Berlin: Springer Verlag, pp. 32-33.
- Czerniewicz, L. and Brown, C., 2009, 'A Study of the Relationship between Institutional Policy, Organizational Culture and e-Learning Use in Four South African Universities', *Computers & Education*, 53(1), pp. 121-131.
- Deniz, L., 2007, 'Prospective Class Teachers' Computer Experience and Computer Attitudes', *International Journal of Social Sciences*, Vol. 2, no. 2, pp. 116-122.
- Eastman, J., 2007, 'Enhancing Classroom Communication with Interactive Technology: How Faculty Can Get Started', *Journal of College Teaching Methods & Styles*, Vol. 3, no. 1, pp. 31-37.
- Frissen, V.A.J., 2000, 'ICTs in the Rush Hour of Life', *The Information Society*, 16, pp. 65-75.
- Fullan, M., 1992, *Successful School Improvement: The Implementation Perspective and Beyond*, Philadelphia, USA: Open University Press, pp. 21-30.
- Ikoru, F.M., 2002, 'Information Sources for Effective Teaching and Learning in Nigerian Languages', *Language Librarianship* 1(2), pp. 21-29.

- Jegede, D.O. and Adelodun, O.A., 2003, 'The Status of Computer Education in Nigerian Secondary Schools', *The African Symposium*, 3(3) 1-4, Retrieved on July 10,2004 from <http://www2.ncu.edu/ncsu/germ/diseedu.pdf>.
- Jegede, P.O. and Owolabi, J., 2005, 'Effects of Professional Status, Subject Discipline and Computer Access on Computer Attitudes among Teacher Educators in Nigerian Colleges of Education', *Information Technology Journal*, Vol. 4, no. 2, pp. 158-162.
- Jung, I., 2005, 'ICT-Pedagogy Integration in Teacher Training: Application Cases Worldwide', *Educational Technology and Society*, 2(3), pp. 387-394.
- Kwache, P.Z., 2007, 'The Imperatives of Information and Communication Technology for Teachers in Nigeria's Higher education', *MERLOT Journal of Online Learning and Testing (JOLT)*, Retrieved on 30/03/2009 from <http://jolt.merlot.org/vol.3no4kwache.htm>.
- Maduekwe, A.N., 2006, 'Perspectives on Teacher Education and ICTs in Language Classroom', in V.B. Owhotu, ed., *An Introduction to Information Technologies in Education*, Lagos: Sibon Books Ltd., pp. 23-25.
- Majasan, B.U., 2003, 'Towards a Focus on ICT in Nigeria: Revolution or Evolution?', Retrieved on 20/12/2010 on from <http://www.faess.jcu.edu.au/soe/staff/neil.erson.html>.
- Namlu, A. and Ceyhan, E., 2002, *Computer Anxiety: A Study on University Students*, Eskrsehir: Eskrsehir University Publishing, pp. 55-61.
- Nwagwu, W., 2006, 'Integrating ICT into the Globalization of the Poor Developing Countries', *Information Development*, 22(3), pp. 167-179.
- Okebukola, P., 2000, 'Teachers Advised to Acquire Computer Education', *The Guardian Newspaper*, Thursday, August 14, 2000, p. 36.
- Oliver, R. and Towers, S., 2000, 'Benchmarking ICT Literacy in Tertiary Learning Settings', in M. Rasims, O' Reilly and S. Sawkins, eds., *Learning to Choose: Choosing to Learn*, Proceedings of the 17th Annual ASCILITE Conference, Lismore, NSW: Southern Cross University Press, pp. 381-390.
- Otunla, A., 2005, *Information and Communication Media in Education and Health Sciences: Techniques, Production and Presentation*, Lagos: Joslam Limited Nigeria Enterprise, pp.41-42.
- Owhotu, V.B., ed., 2006, *An Introduction to Information Technologies in Education*, Lagos: Sibon Books Ltd., pp. 111-113.
- Owhotu, V.B., 2009, 'Goals, Challenges and Prospects of UNESCO Teacher Training Initiative in Sub-Saharan Africa', in V.B. Owhotu, ed., *Innovation and Best Practices in Teacher Education*, pp. 35-37.
- Oyewo, O.T., 2008, 'The Place of Technology in Education: Policy, Organizational Culture and e-Learning Use in Four South African Universities', *Computers and Education Lagos*: Logon Publishers, 53(1), pp. 121-131.
- Pedersen, P. and Ling, R., 2003, *Modifying Adoption Research for Mobile Internet Service Adoption: Cross-disciplinary Interactions*, Proceedings of the 36th Hawaii International Conference on System Sciences, pp. 121-141.

- Pelgrum, W., 2001, 'Obstacles to the Integration of ICT in Education: Results from a Worldwide Educational Assessment', *Computers & Education*, 37(2), pp. 163-178.
- Postman N., 1993, *Technopoly: The Surrender of Culture to Technology*, New York: Vintage Books, pp.196-197.
- Rajesh, M., 2003, 'The Study of the Problems Associated with ICT Adaptability in Developing Countries in the Context of Distance Education', *Turkish Online Journal of Distance Education (TOJDE)*, 4(2), pp. 21-26.
- Rogers, E.M., 2003, *Diffusion of Innovations* (5th Edition), New York: Free Press, p. 16.
- Ruthven-Stuart, P., 2003, 'Integrating ICT into a University Language Curriculum: Can It be Done Successfully?', *Hokuriku: Bulletin of Hokuriku University*, 27, pp. 159-176.
- Salawu, I.O., 2002, 'Towards Effective Integration of ICT into Teacher Education Curriculum in Nigeria', *Nigeria Journal of Computer Literacy (NJCL)*, Vol. 3, p. 73.
- Stephen, J., 2001, *Teaching and Learning Online: Pedagogies for New Technologies*, London: Kogan Publishers, pp. 17-19.
- Tinio, V.I., 2007, 'ICTS in Education: Changes in Integrating ICTs into Education', Retrieved on 25/02/09 from <http://en.wikibooks.org/key>
- Udeani, U., 2006, 'Gender and Information and Communication Technology in Education', in V.B. Owhotu, ed., *An Introduction to Information Technologies in Education*, Lagos: Sibon Publishers, pp. 205 -208.
- Ushe, B.C., Asanga, D. and Inyang, 2008, 'Academic Staff Use of Internet in Federal Colleges of Education in Middle-Belt Nigeria', in Biodun Akinpelu, ed., *Nigeria Association for Educational Media and Technology (NAEMT) Conference Proceedings*, LASU.
- Warschauer, M., 2003, *Technology and Social Inclusion: Rethinking the Digital Divide*, Cambridge: Massachusetts Institute of Technology Press, pp. 22-25.
- Warschauer, M., 2000, 'The Changing Global Economy and the Future of English Language Teaching', *TESOL Quarterly*, 34(3), pp. 511-535.
- Webber, C., 2003, 'Introducing New Technologies and Educative Leadership', *Journal of Educational Administration*, 4(22), pp. 119-123.
- Yusuf, M., 2005, 'Information Communication Technology and Education: Analyzing the Nigerian National Policy on Information Technology', *International Education Journal* 6(3), pp. 316-321.

