

# Computer Communication and ICT Attitude and Anxiety Among Higher Education Students

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## INTRODUCTION

Computer communication (CC) otherwise known as information and communication technology (ICT) has altered the academic landscape in higher education. Computer communication is perhaps the most fundamental information and communication technology tool in use today. With pressures increasing on higher education institutions to find ways to “do more with less,” CC/ICT is to maintain or improve the quality of services in higher education and at the same time, significantly reduce costs (Voss & Hadden, 2006). These days, the teaching and learning process has been altered by the convergence of several pedagogical developments aided by technological advancements. Advances in computer technology and the diffusion of personal computers, including software and network resources, have hastened the development, implementation and accomplishment of new and innovative teaching-learning strategies. As a result, instructors believe that a greater integration of ICTs in the instructional process tends to improve learning and better prepare students to effectively participate in the changing global work environment (Ololube, 2006b; Sam, Othman, & Nordin, 2005).

Computers and their associated products and processes have become core components of the higher education environment especially in the West. Students in advanced countries use computers as a means of communication and to complete the majority of their academic work (Green, 1998). As a result they have become a way of life for students in the West as opposed to students in higher education environments in most developing economies especially Africa. Nevertheless, the Republic of South African is more adept at integrating ICT for national development and within their educational sectors (Fielden, 1998; Lund, 1998) than other countries in Sub-Saharan Africa, including Nigeria (Ololube, 2006a). However, many students in

this region’s higher education find it very difficult to effectively use and make computer communication part of their every day lives.

Many students in Nigerian higher education find it very difficult to effectively integrate and diffuse computer products and processes into their academic activities that instigate information searches and attribution formulations. That is why this exploration measured and examined the ways in which CC/ICTs used in institutions are deemed acceptable and good for students’ academic activities. We also recognize that the intimidating study environment has been construed to suggest a sense of weakness towards students’ effective CC/ICT utilization. Overall, African CC/ICT readiness is poor in comparison to other economies, particularly Sub-Saharan Africa (SSA) with the exception of South Africa; on the other hand, North African countries fared better than those in SSA (Colle, 2005; Ifinedo, 2005). This study investigated students’ attitudes and anxieties. It theoretically and empirically analyzed students’ CC/ICT competencies and how they affect their educational/academic development. Data was elicited from students in two state universities in Nigeria.

This study integrates literature on computer anxiety and communication apprehension to determine their joint impact upon individual attitudes toward using computer communication (CC). This study introduces a new research domain and its application in identifying computer communication attitude and anxiety from a developing economy’s perspective. This study to the best of my knowledge breaks academic ground because it is a domain that has been under-researched in Sub-Saharan Africa. This study moves forward a new framework that places CC/ICTs attitude and anxiety as an assemblage between the more general framework on computer communication attitude and anxiety with which we are familiar.

## BACKGROUND AND PURPOSE TO THE STUDY

Computer mediated communication (CMC) is fast becoming part of our society and the use of information and communication technology (ICT) is becoming an integral part of education in many parts of the world (Kuntoro & Al-Hawamdeh, 2003; Sala, 2004). Africa is not left behind as ICT gradually finds its way into its educational systems (Brown, 2002; Darkwa & Eskow, 2000) despite chronic limitations brought about by economic disadvantages (Adesola, 1991). Exposure to the new medium of communication gives one the opportunity to acquire unlimited amounts of knowledge and a chance to communicate with others around the world. It is a fast way to create, send and consume new information and extends our mental capabilities and enhances our intellect. Yet there are many people who will be left behind in the technological quest for the faster and more efficient mode of communication. In addition, access to people, places and information is changing. A real change can be found in education. Despite income, school budgets or demographics soon all students will have access to information through the Internet. E-mail is taking the place of interoffice correspondence. Business is rapidly becoming computerized. Thus, students and workers will need to be comfortable with computers. As the academic and business environments continue to move forward in computer technology, the gap is widening for those people who experience computer anxiety (Orr, n.d).

Computer communication attitude and anxiety amongst higher education students is not new in research studies (Chua et al., 1999; Igbaria & Chakraborti, 1990; Parasuraman & Igbaria, 1990). However, in integrating computers in higher education, researchers' results of computers having been integrated have proposed that positive attitudes toward computers and high computer self-efficacy and lower computer anxiety levels could be important factors in helping people learn computer skills and use computers. It is recognized, for example, that some college students felt confusion and a loss of personal control when they encountered technology. As many as one-third of the 14 million college students in the United States suffer from technophobia and implied that effectiveness in the use of computers in higher education might not be realized without research foundations and corresponding planning (Sam, Othman, & Nordin, 2005).

Fundamentally, education is a discipline like any other; it is a branch of human knowledge which is basically concerned with getting the young in the society prepared when they come of age (Ezewu, 1983). According to Gbamanja, (1989), education is a process which seeks to change the behavior of a learner. Overall, behaviorists view education as the process of changing the behavioral patterns of people. Behavior in this sense refers to the way we change the learner: his or her thinking, his or her feelings and his or her overt actions (Hergenhahn & Olson, 1997). Thus, education is the process by which society deliberately transmits its cultural heritage through schools, colleges, universities and other institutions (Gbemanja, 1989). In order to achieve the aforementioned purposes in education, information, and communication technology (ICT) one could argue is an essential ingredient that could help bring these gains and benefits to the fore. Practically, several researchers and commentators in the developed West admitted that problems abound in educational systems that ICT could help improve (Leidner & Jarvenpaa, 1993). Similar ICT problems would be expected to improve in the educational sector of many developing countries (Ololube, 2006a, 2006b).

## CM/ICTs ATTITUDE AND ANXIETY

Available evidence shows that the digital divide is closing rapidly. During the last decade, millions of people especially in advanced countries have gained access to computers every year. Never in human history have there been so many people with access to computers, digital networks, and electronic communication technologies (Tuomi, 2000). The digital divide is the disparity in access to CM/ICTs that exists across certain demographic groups, discussion of which has been dominated by the gap between household access to computers and the Internet. Technically, the digital divide includes disparities in access to other related technologies as well. The term digital divide is used to refer to differing standards or imbalances between countries fully poised to reap the benefits of the information age and those that are unable to do so (Ifinedo, 2005; The Bridge Organization, 2001).

Literature on CM/ICTs attitude and anxiety offer conflicting ideas. Researchers (e.g., Agnetha Broos, 2005; Necessary & Parish, 1996), support the idea that increasing computer experience will decrease computer

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