# UNIVERSITY STUDENTS' ATTITUDE TOWARDS CYBERSPACE LEARNING: AN INVESTIGATIVE STUDY

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## Abstract
The advent of the Internet, combined with the development of commercial network providers has opened up a lot of opportunities for individuals, schools, and organizations to communicate with each other and to share information. This is an investigative study which aims at finding out University students' attitude towards Cyberspace-learning. 223 (118 female and 95 male participants) Nigerian university students enrolled in two Nigerian universities responded to semi-structured questions developed by the authors exploring their attitudes towards Cyberspace-learning. The data collected were subjected to chi-square statistical analysis. The results were significant for gender; showing that higher number of female participants more than male participants would rather engage in cyber-learning most of the time. However, the results of comparison of the participants based on their educational level showed that the graduate students were more likely to answer "Yes" to the question "Would you rather engage in cyberspace-learning most of the time?" The results also showed that most of the participants have positive dispositions towards cyberspace-learning

Keywords: cyberspace, internet, learning, cyberspace-learning, Nigerian university students, attitudes

## INTRODUCTION
According to Strate (1999), the term "cyberspace" which was coined from the parent term "cybernetics" was able to represent the many new ideas and phenomena regarding the internet, networking and digital communication that were growing dramatically

Cyberspace is the electronic medium of computer networks, in which online communication takes place (Houghton Mifflin Harcourt, 2009).

An attitude can be defined as a positive or negative evaluation of people, objects, event, or activities. It could also be described as 'a settled way of thinking or feeling about something'

Learning refers to the process of acquisition of knowledge or skills by being taught, studying, practicing, or experiencing something.

Computer-based learning include the following:

(a) Computer-assisted instruction (CAI), (b) the internet's World Wide Web (WWW), (c) Electronic mail (E-mail), (d) Chat-rooms communication, (e) Video-conferencing, (f) Paperless classroom and (g) Interactive computers/televisions, and satellites

### (a) Computer-assisted Instruction (CAI)
Computer-assisted Instruction (CAI) can be considered to be the greatest value of computers which reside in the ability to provide improved support to classroom instruction, and there are varieties of software programs for such use

Some software integrated a number of components from traditional classroom instruction. There are menu-based applications that allow students to enter the information

stream at a variety of points, rather than be forced to follow a predetermined path. This approach allows students to determine what they think is important rather than what the instructor has deemed important, reinforcing students' ability to control the learning process which could result in a reduction in the amount of classroom time. Mohnsen (1995) identified a number of reasons for using CAI in education. Among them were suggestions that CAI provides students with the "why" behind what they are doing; it provides unlimited practice, review, and remediation; students stay actively involved; and it meets a variety of student needs (Sandholtz, 2001). CAI, if individually developed, requires considerable time on the part of the instructor, but this is compensated for by increased learning time available in the classroom. Using CAI, an instructor can develop or acquire a series of supportive and reinforcing software.

Computers also have integrated learning with multimedia presentations. Traditional encyclopaedias and reference books have been replaced by compact discs with read-only memory (CD-ROM) that contain pictures, sound, and video, as well as the standard text. In the classroom, students can observe and listen to the examples and play over those parts they do not understand. Instructional topics remain traditional, but the delivery is non-traditional and allows the student to move at her/his own pace (Shuell & Farber, 2001).

### (b) The internet's World Wide Web (WWW)
This is that part of the Internet supporting graphics, audio, video, and hypertext links as well as standard text. From the convenience of the classroom a student using a computer and a modem, can log on to a variety of sites

throughout the world. Students can take notes and copy the pictures to a notebook that is built into the program and can download and print the notes (Shuell, 1992).

### (c) Electronic Mail (E-mail)

With the invention of the internet came one of the most useful tools, for communication which is the electronic form of sending and receiving mails commonly refered to as the 'E-mail'. Electronic mail (E-mail) through access to the internet has become very popular all over the world. It is a fast and convenient method of sending messages to individuals and groups whether locally or internationally. The E-mail is used to facilitate communication among students and between the instructor and students. E-mail allows individuals to send letters and post messages to one another through their computers and telephone lines. As technology develops, E-mail is being used for a wider variety of functions including being used as an educational tool (Olusakin, 2009).

E-mail provides students advantages similar to that it offers those involved with distance learning education (Myrick &Sabella, 1995). An established network can connect individuals and groups to work together. Students can connect with colleagues or teachers to discuss particular situations for which they are requiring information. A collection of students' and Lecturers' names and E-mail addresses (Listserv) can be disseminated to those that would like to participate. When situations arise, or at regularly scheduled intervals, individuals can post E-mail messages and receive feedback and suggestions from others in the group.

A drawback to the use of computers for transmitting information is that there is no guarantee on the identity of the receiver. When sent, E-mail is stored on an individual's server until it is read, responded to, saved, or deleted. E-mail messages are also vulnerable to access from unwarranted recipients. If an individual is using an un-secure server, or is on a computer accessed by a group of people, confidentiality may be compromised. Individuals have to review the risks and benefits of using E-mail before they proceed. It is not recommended for every situation, but in particular instances it might be the ideal solution.

### (d) Chat-rooms

Similar to the concept of E-mail is that of chat rooms communication. These options allow individuals to post comments and questions to others in a group and receive feedback or suggestions. Also, these electronic discussion boards are used to expand classroom discussion. The improvement over E-mail is that the communication among the group is in real-time. These programs allow individuals to log on to their computer and chat with other individuals. Questions can be answered instantly and a discussion can follow.

A list of all group members and their assigned/chosen screen names has to be compiled. If using a chat room, all individuals who want to participate in the program can meet in a designated room. Current chat-room technology allows for secure and private rooms where access is restricted to only those who are part of the group. A real time discussion forum can take place between the students and the teacher on one hand, and among the students who are also able to communicate with one another when the need arises.

The chat group members can communicate with individuals from all over the world without the hassles of having to travel or the expenses of long-distance telecommunications. The major drawback is that it requires everyone to have access to a personal computer. To alleviate this problem, new technologies are being developed that utilize central locations for groups to meet in and communicate with other group members at a remote site (Jancius & Paez, 2003).

### (e) Video-conferencing

With the proper equipment, a Lecturer can interact with the students at various locations with real time video and audio capabilities. The students are also able to communicate with one another as well (Day & Schneider, 2002). This approach is modelled closely after the distance learning technology that is becoming more prevalent in higher education settings.

Videoconferencing has many benefits as a learning approach. It has the flexibility to allow group participants to either share their communication with the whole group or privately with another group participant without involving the whole group (Fetterman, 1996).

Videoconferencing is more secure than E-mail or chat room transcripts that are considered public record (Santo & Finkel, 1982; Myrick &Sabella, 1995). The sense of security in video-conferencing is based on the fact that it utilizes a closed point-to-point communication system and occurs in real time (Roblyer, 1997). The use of video conferencing is beneficial for both individual and groups. Individuals are able to communicate without being in proximity with one another, and can share written, voice, and image messages (Fetterman, 1996; Sampson, Jr., Purgar & Shy, 2003).

### (f) Paperless classroom

The development of local area networks (LAN) allows students to communicate with their teachers and with each other locally without leaving their location or without the need of a telephone conversation. A LAN provides a physical link between several personal computers and a mainframe (White, 1993). In some instances paperless classrooms have been developed using the LAN as a communications base. A paperless classroom allows the student to submit work through a computer to a central location where it is graded by the instructor and then returned to the student's electronic mailbox. The advantages of this include the speed with which one can respond, always having a copy of the students' papers, timeliness, and increased comfort with software packages that students may frequently use (Karayan & Crowe, 1997).

**(g) Interactive computers/televisions, and satellites**
Classrooms around the world can now be connected using technologies that include computers, interactive television, satellites, and the Internet. The linking of computer technology through the use of the Internet or CD-ROM with television transmission provides a new dimension to distance education. This technique can be used to link students to their teachers and other students even when they are all physically distant from each other (Shuell, 1992; Brett, 1996).

## MOTIVATION FOR THE STUDY
The world is now like a global village with a lot of benefits on the information highway. Enlightenment derived from many international conferences constitute the motivation for this study

## SIGNIFICANCE OF THE STUDY
Students at various levels of education, teachers as well as parents, could make use of the content of this study. The researchers could explore other areas based on this work.

## METHODS AND PROCEDURES
The volunteered respondents were a total of 213 (123 undergraduates and 90 graduate) students enrolled in two Nigerian universities. They were made up of 118 female students (63 undergraduates and 55 graduates) and 95 male students (60 undergraduates and 35 graduates). All the participants were within the age range of 16 to 54years. The mean age was 35years. Descriptive information about the participants showed the composition of the respondents to be : undergraduates 58% and graduates 42%; female participants 55% and male participants 45%; undergraduate female participants 53% and undergraduate male participants 47%; Female Graduate participants 61% and Male Graduate participants 39%. The participants responded to semi-structured questions developed by the authors exploring their attitudes towards Cyberspace-learning. The data collected were subjected to chi-square statistical analysis.

## RESULTS
Table 1: Chi-Square Statistical Analysis of Level of Preference for Cyber-learning based on Gender
**Do you prefer Cyber-learning to the traditional Face-to-face Classroom learning?**

| Gender | No | Yes | Total |
|---|---|---|---|
| Female | 44 (37.3) | 74 (62.7) | 118 (55.4) |
| Male | 26 (27.4) | 69 (72.6) | 95 (44.6) |
| Total | 70 (32.9) | 143 (67.1) | 213(100) |

**Chi-Square $X^2$ cal = 2.34; df = 1; P < .05**
The results were significant for gender; showing that higher percentage (72.6) of male participants more than female participants (62.7%) would rather engage in cyber-learning most of the time. This result supports Bruner and Bennett (1998); Butler (2000); Shasharini, (1997); Wiburg, (1995).

Table 2: Chi-Square Statistical Analysis of Educational Level Influence on Preference for Cyber-learning.
**Do you prefer Cyber-learning to the traditional Face-to-face Classroom learning?**

| Educational Level | Responses | |
|---|---|---|
| | No | Yes |
| Undergraduates | 40 (32.5) | 83 (67.5) |
| Graduates | 30(33.3) | 60 (66.7) |
| Total | 70 (32.9) | 143 (67.1) |

**Chi-square $X^2$ cal = 0.094; df = 1; P < .05**

The results of comparison of the participants based on their educational level showed that there was no significant difference in the percentage of undergraduate students who were more likely to answer "Yes" to the question "Would you rather engage in cyberspace-learning most of the time?" (67.5%) compared to the percentage of graduate students (66.7%) who were more likely to answer "Yes" to the question "Would you rather engage in cyberspace-learning most of the time?"

The results also showed that most of the participants 143 (67.1%) have positive dispositions towards cyberspace-learning. This is in consonance with Olusakin (2009).

## CONTRIBUTIONS TO KNOWLEDGE
This study has highlighted the points that Cyber-space-learning provides students with an alternative to classroom settings and frees the instructor from rote processes that are better handled by the computer.

Female students still desire face-to-face human interaction in addition to cyber-learning while most of the students have come in terms with the ideals of cyber-learning.

## CONCLUSION
It is now quite obvious that computer-based technology training need to be incorporated into all levels of education to achieve the greatest educational impact (Shuell & Farber, 2001; Jencias and Paez, 2003). For example:

University students should:
* Be computer-literate.
* Be able to use E-mail.
* Be able to use productivity software to develop group presentations, letters, and reports.
* Be able to use such audio-visual equipment as video recorders, audio recorders, projection equipment, video conferencing equipment, and playback units.
* Be able to search for various types of information on the Internet, including information about careers, employment opportunities, educational & training opportunities, financial assistance/scholarships, treatment procedures, and social and personal information.
* Be able to subscribe, participate in, and sign

off relevant listservs .
- Be able to access and use relevant CD-ROM databases.
- Be able to use computerized statistical packages.
- Be able to use computerized testing, diagnostic, and career decision-making programs.
- Have knowledge of the internet-related legal and ethical codes.
- Have knowledge of the strengths and weaknesses of services provided on the Internet and be able to evaluate the quality of Internet information.

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