UNDERGRADUATE ST UDENTS' COMPUTER ATTITUDE AND THEIR ACHIEVEMENT IN INTRODUCTION TO COMPUTERS IN CROSS RIVER STATE OF NIGERIA

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Abstract

This paper reports an Ex post facto design investigation of undergraduate students' attitude towards computers and their performance in introduction to computer in Cross River State of Nigeria. Four hypotheses were formulated to guide the study. Computer Attitude Scale (CAS) was administered to 1000 randomly selected third year undergraduate students from five faculties namely Arts, education, management science, medicine and science during the 2005/2006 session. The data collected were subjected to statistical analysis using Population t-test for single means, Pearson Product Moment Correlational Analysis, Analysis of Variance and Fishers' LSD Multiple Comparism Test. The results of the analyses showed that undergraduate students have positive attitude to computers; undergraduate students' attitude towards computer was positively associated with their achievement in introduction to computers. Results also showed that gender, age and faculty were factors that predict computer attitudes and achievement. Based on the findings recommendations were made.

Keywords: Computer Attitudes, Undergraduate Students, Achievement, Introduction to Computers

Introduction.

Attitude has been defined as "a learned predisposition to respond positively or negatively to a specific object, situation, institution or person" (Aiken, 2000, p.248). Attitude, whether positive or negative, and how it influence behaviour, varies in its interpretation. In general however, it is regarded as a preparation or readiness for responses. Therefore, attitude affects people in everything they do and infact reflects what they are, and hence a determining factor of people's behaviour. Since attitude is the determing factor of people's behaviour, then it is critical in education (Yushau, 2006).

The tremendous influence and growth of computer technology creates pressure in everyone affected by its prolification, to interact with computers and become proficient in their use. According to Okebukola (1992; 221 "the computer is causing a change in society that is comparable to the change occasioned by the industrial revolution".

A computer is an automatic electronic machine that is designed for solution of complex mathematical problems. It also has the capacity to store, retrieve and process data. A computer is capable of accepting data, performing operations according to instruction

(programmes) and providing the results of the operation. This stored programme concept and the memory capability are two primary characteristics differentiating the computer from a high-speed calculator. The controlled function involves following instructions precisely as stored. The computer must be instructed (programmed) for every step.

Computer is the in-thing in the university now. All students type their assignments, term paper and projects with computer. The neat computer prints and fast production of whatever is typed, makes the use of the computer very appealing to students make. Browsing the internet for information is gradually gaining popularity amongst students, who browse for information which they use for various projects and assignments. Although it could be said that this is a new trend, the facilities available to the students is very limited and those who go out to seek such facilities are not many. In the recent past, students carrying out project would administer questionnaires, collect and analyze the responses. For this responses to be analyzed now, it demands much time and computer has been programmed to carry out all the various statistical analysis, which the researcher used to arrive at manually. Years ago, as indicated things were done manually, today the student simply takes the data he has collected, to the university computer centre where the computer does all the statistical analysis and gives him the information he needs for his project.

Given the pervasiveness of computers in all levels of educational system, it is likely that students have developed some attitudes towards these machines. In a classroom setting. Studies have shown that students often experience reactions towards computers either positively or negatively. This in turn either enhances or interferes with their development of effective learning (Geer, White & Barr, 1993). Furthermore, attitude towards computers has been found to influence not only the acceptance of computers in classroom, but also future behaviour, such as using a computer as a professional tool or introducing computer applications into the classroom (Al-Badr, 1992). A student with a negative attitude towards computers may not pay attention to anything to do with computers. Similarly, students that are computer enthusiasts may pay attention to any program that is computer based and this may influence their attitudes toward the subject. Studies have shown that computer attitudes are a strong predictor of performance and evaluation of a computer literacy courses. (Batte, Fiske and Taylor, 1986). Some other studies have shown that the use of computer in education has the potential of changing students' attitudes positively towards computers (Bangert, Kullik, & Kullik, 1983; Kulik, 1984; Ganuli, 1992 and Funkhouser 1993).

For instance, Al-Rami (1990) examined the students' attitude toward learning about and using computers and correlated their attitudes with their achievements in computer classes. One hundred and seventy two male students participated. Student attitudes were determined at the beginning and end of the semester using the Computer Attitude Scale (Loyd and Gressard, 1984). Academic achievement was based on end-of-semester scores. Findings indicated that students' attitudes toward computers were positive at all semester levels.

Computer attitude has been consistently found to be an important variable in educational computing research (Lim, 2002; Lue, 2003); and plays a role in students' success in computer – related tasks (Loyd & Gressard, 1984). Attitudes can be related to a number of factors such as computer experience, age, gender, and academic performance. There has been a great deal of research on the relationship between genders and attitude

toward computers. Early studies have shown that females tended to have more negative views towards computers than male (Chen, 1985; Gattiker & Nelligan, 1988; Koohang, 1987). These studies suggested that males were less anxious, more confident and like using computers more than female. When computer experience was taken into consideration, however, research found that gender did not directly affect a student's attitude toward computers (Chen, 1985; Hunt & Bohlin, 1993; Levin & Gordon, 1989; Teo & Lim, 1996). Since the increased computer uses in schools and homes in the 1990s, especially with the widespread use of email and internet, studies have shown that the gap in attitudes toward computers between the genders has disappeared (Dyck & Smither, 1994; Houle, 1996; Todman & Monaghan, 1994). However, most recent studies have indicated a trend more consistent with the early findings. In a longitudinal study investigating the relationships between gender, categories of computer use and attitudes toward computers, Mitra and her colleagues found that females were less positive about computers than males, and used computers less frequently (Mitra, Lenzmeier, Steffensmeier, Avon, Qu, & Hazen, 2000). In another longitudinal study, it was found that men were more willing to take a positive attitude toward the technological innovations (Mitra, LaFrance & McCullough, 2001). In his study, Kadijevich (2000) found that ninth-grade male students showed a more positive attitude toward computer than females, even when computer experience was controlled.

Some researchers asked the question if females and males held the same attitude toward all types of computer use (Mitra, Lenzmeier, Sreffensmeier, Avon, Qu, & Hazen, 2000; Scott & Rockwell; 1997). Lockheed (1985) found that males used computer for programming and game playing more than females. A study by Scott and Rockwell suggested that males reported liking to play video games more than females (1997). Mitra, LaFrance, and McCullough (2001) suggested that genders might differ in attitudes toward computer in terms of types of computer use. It is against this background that this study investigated students' attitude towards computer and their achievement in introduction to computer.

The Purpose of the Study

The purpose of this study was to find out the extent to which computer attitude influence students' performance in introduction to computer. Specifically the study considered the:

a) Undergraduate students' attitude towards computer
b) Influence of undergraduate students' attitude towards computers and their academic achievement in introduction to computer
c) Influence of demographic variables of genders, age, and faculty of study on students' attitude towards computer.
d) Influence of demographic variables of gender, age, and faculty of study on undergraduate students' achievement in introduction to computer.

Research Hypotheses

The following hypotheses were formulated to guide the study.

a) Undergraduate students attitude towards computer is not significantly positive.
b) There is no significant relationship between undergraduate students' attitude toward s computer and their academic performance in introduction to computer.
c) There is no significant influence of demographic variables of genders, age, and faculty of study on students' attitude towards computer

d) There is no significant influence of demographic variables of gender, age, and faculty of study on undergraduate students' achievement in introduction to computer.

Methodology

Research Design

Ex post facto design was used in this study. According to Kerlinger (1973) Ex post facto design may b defined as that research in which the independent variable have already occurred and in which the research starts with the observation of the dependent variable(s). He then studies the independent variable(s) in retrospect for possible relations and effects on the dependent variable(s). In this study, since students' attitude towards computer and their performance have already occurred, no attempt was made to manipulate or control them. Gender, age and students' facility of study which were identified as moderator variable also studied.

Population and Sample

The population used for this study was undergraduate students from the University of Calabar in Cross River State of Nigeria, for the session 2005/2006. The total population for that session was 4000 student.

The sample consisted of five faculties in the University namely: Arts, Education, Science, management Science and Medicine. In order to obtain a representative sample of undergraduate students. Stratified random sampling procedure was used and 1000 undergraduate students were selected from the five faculties chosen. Two hundred undergraduate students were randomly selected by balloting from each faculty giving a sample size of 1000. The basis of stratification was faculty and gender. Within each stratum 200 students were randomly selected. A breakdown of the sample gave 500 males and 500 females.

Instrumentation

The computer attitude scale CAS originally developed by Loyd and Gressard (1984) was adapted to measure the undergraduate students' attitude. According to Nash and Moroz (1997), CAS is a measure towards computer attitude has been used extensively with college students and professional educators. CAS is a Likert type instrument consisting of 30 items in three dimensions, computer anxiety (10), computer liking (10 items) and computer confidence in ability to use computers. A sample of ten items were adapted from the whole instrument to depict students attitude towards computers. The coefficient of alpha was 0.91. Since the respondents were bilingual and proficient enough in understanding English language, the items were not translated into the vernacular language: CAS which measure computer attitude comprised of two sections A and B. Section A dealt with general demographic information while section B was a ten item, Four point likert type questionnaire with response option ranging from strongly agree to strongly disagree.

Data Collection Procedure

One thousand questionnaire were administered to a random sample of the undergraduate students from five faculties in the university and students were allow thirty

minutes to respond to the questionnaire in their class setting. The data was collected during the second semester of 2005/2006. The questionnaire requested information for students' registration number. With this information the students' scores in introduction to computers were retrieved from the centre for general studies for the session under review. In order to ensure 100% return with no attrition, the researcher sought the assistance of the lecturers of the various faculties used.

Statistical Techniques

The data obtained from the questionnaires and centre of general studies were collated and subjected to statisitical analysis using the population t-test, independent t-test, Pearson Product Moment Correlational Analysis, the One Way Analysis of Variance and the Fishers' LSD Multiple comparison test for significant F-ratios.

Results

Hypothesis 1

Undergraduate students' attitude towards computers is not significantly positive

Table 1

Population t-test Analysis of Undergraduate Students' Attitude towards Computers

(n = 1000)

S/N	Items	Expected mean μ	Observed mean X	Standard Deviation SD	T
1.	I prefer studying computer to any other subject	2.5	2.53	1.01	1.01
2	The complexity of the computer always scares me	2.5	3.01	.99	16.19*
3	I always attend computer classes punctually.	2.5	2.67	.98	5.47*
4	Computer create new way of working	2.5	3.47	.66	46.86*
5	Computer give new opportunities for problem solving	2.5	3.36	.86	31.60*
6	Computer complicate studying	2.5	2.89	1.01	12.12*
7	I always like to work on a computer before a day is over	2.5	2.50	.94	00.00
8	Every career in computer is always demanding	2.5	2.62	1.06	3.47*
9	Computer develop diverse information handling skills	2.5	3.32	.81	32.15*

10	Computer reduce social contacts with other students and teachers	2.5	2.57	1.11	2.05*
Total		25	28.84	3.47	34.96*

Hypothesis 2
There is no significant relationship between undergraduate student's attitude towards computer and their performance in introduction to computer.

Table 2
Pearson Product Moment Correlation Analysis of Relationship between Students' Attitude towards computer and their academic achievement in Introduction to Computers
(n = 1000)

Variable	X	SD	R
Students' attitude toward computers (x)	28.84	3.47	.16*
Students' achievement in introduction to computers (y)	47.62	14.72	

*Significant at .05; df = 998 critical r = 0.06

Table 2 presents a summary of the Pearson Product Moment Correlational analysis of relationship between undergraduate students' attitude towards computer and their performance in introduction to computer. The result of the analysis showed a significant positive r-value of 0.16. This value at .05 alpha level and with 998 degrees of freedom was found to be greater than the critical r-value of 0.062. The null hypothesis was thus rejected. This finding means that there is a significant positive relationship between undergraduate students' attitude towards computer and their performance in introduction to computer. The positive r-value implies that the more positive students attitude are towards computer, the higher their performances in introduction to computer. On the other hand the less positive students' attitudes are toward computer, the lower their performances in introduction to computer tends to be.

Hypothesis 3
There is no significant influence of demographic variables (gender, age and faculty) on students' attitude towards computers.

a) Gender and students' attitude towards computers

Table 3
Independent t-test Analysis of Influence of Gender on Undergraduate Students' Attitude towards Computers

Gender	N	X	SD	t
Male	500	30.18	3.18	
				12.18*
Female	500	27.50	3.72	

*Significant at .05; df = 998; critical t = 1.96

The result of the analysis in Table 3 showed that there is a significant gender difference in students' attitude towards computer (t = 12.18; p<.05). The null hypothesis was rejected because the calculated t-value of 12.18 was found to be far greater than the critical t-value of 1.96. Further observation of table 3 shows that male students had a higher mean attitude score (x = 30.18) than their female counterparts (x = 27.50). Statistical comparison using independent t – test analysis showed a significant difference. This finding means that male undergraduate students have more positive attitude toward computers than their female counterparts.

b) Age and students' attitude towards computers

Table 4
One Way Analysis of Variance of Influence of Age on Undergraduate Students' Attitude towards Computers

Age	N	X	SD	
Below 20	**144**	**27.72**	**3.34**	
21 – 30	788	28.96	3.51	
31 and above	68	29.82	2.79	
Total	1000	28.84	3.47	
Source of variation	Sum of Square	Degree of freedom	Mean of square	F
Between Groups	256.928	2	128.464	10.856*
Within Groups	11797.472	997	11.83	
Total	12054.400	999		

*Significant at .05; critical F = 3.00

Table 4 shows that there is a significant influence of age on students' attitude towards computer (F = 10.858;P<.05). The null hypothesis was rejected because the F-ratio of 10.856 was found to be greater than the critical F-ratio of 3.00. given .05 level of significance and with 2 and 997 degrees of freedom.

Given the significant F-ratio a Fisher's Least significance difference (LSD) multiple comparison Test analysis was done to locate the source of the difference. The result of the analysis is presented in Table 5.

Table 5
Fishers' LSD Multiple Comparison Test Analysis of Influence of Age on Undergraduate Students Attitude Towards Computers

Age	Below 20 years	21 – 30 years	31 and above

	(n = 144)	(n = 788)	(n = 68)
Below 20 years	27.72	-1.24b	-2.10
21 – 30 years	4.10*c	28.96	-.86
31 and above years	4.12*	1.99*	29.82
	Msw = 11.833		

*P<.05

a. Group means are placed along the principal diagonal

b. Differences between group means are above the diagonal

c. Fishers' LSD t-values are below the diagonal.

Results in Table 5 showed that students within the age brackets of 31 and above had significant higher attitude towards computer than students without the age bracket of below 20 years (t = 4.12; p<.05). The pairwise comparison between age 21 – 30 years and below 20 was also significant in favour of the former (t = 1.99; p<.05). This result implies that the older the age of the students, the more positive their attitudes are towards computer. The younger the students, the less positive their attitudes are towards computers.

c) Faculty of Study

Table 6
One Way Analysis of Variance of Influence of Students' of Faculty of Study on their Attitude toward Computers

	Faculty	N	X	SD
1	Science	200	29.64	2.91
2	Education	200	28.94	3.82
3	Arts	200	27.68	3.49
4	Management Sciences	200	28.54	3.64
5	Medicine	200	29.40	3.11
Total	1000	28.84	28.84	3.47
Source of variation	Sum of squares	Degree of freedom	Mean square	F
Between group	479.84	4	119.96	10.31*
Within group	11574.56	995	11.63	
Total	12054.40	999		

*Significant at .05; critical F = 2.37

Table 6 presents the result of the analysis of variance of influence of students' faculty of study on their attitude towards computer. The obtained F-ratio was 10.31. This value was found to be greater than the critical F-ratio of 2.67. The null hypothesis was rejected. This result means that the students' faculty of study has a significant influence on undergraduate students' attitude towards computer. Given the significant F-ratio, the multiple comparison test analysis using Fishers' LSD was alone to locate the source of difference. The result is presented in Table 7

Table 7
Fishers' LSD Multiple Comparison Test of Influence of Students Faculty of study on their Attitude toward Computers

Faculty	Science (n = 200)	Education (n = 200)	Arts (n = 200)	Management Science (n = 200)	Medicine (n = 200)
1	29.64a	.70b	1.96	1.10	.24
2	2.06*c	28.94	1.26	.40	-.46
3	5.76*	3.71*	27.68	-.86	-1.72
4	3.24*	-1.18	-2.53*	28.54	-.86
5	0.71	-1.35	-5.06*	-2.53*	29.40
	Msw= 11.63				

*Significant at .05
a. Groups means are placed on the principal diagonal
b. Differences between group means are above the diagonal
c. Fisher's LSD t-values are below the diagonals.

The result in Table 7 shows that students in the science faculty has significant higher mean attitude than students from Education (t = 2.06; p<.05), Arts (t = 5.76' p<.05), and management sciences (t = 3.24). Similarly, students from medicine faculty had significant higher mean attitude than students from arts (t = -5.06; p<.05), and management sciences (t = -2.53; p<.05). The pairwise comparison of science with medicine was not significant (t = 0.71; p>.05) and medicine with education was insignificant (t = -1.35; p>.05). This findings imply that students, from the science faculties have better attitude towards computer than students from arts, education and management sciences.

Hypothesis 4
There is no significant influence of demographic variables of (gender, age and faculty of study) on undergraduate students performance in introduction to computer.

a) Gender and Achievement in Computers

Table 8
Independent t-test Analysis of Influence of Gender on Undergraduate Students Performance in Introduction to Computers

Gender	N	$\bar{X}$	SD	t
Male	500	49.79	14.59	4.56*
Female	500	45.46	14.89	

*Significant at .05; df = 998; critical t = 1.96

The result of the analysis in Table 8 showed that there is a significant gender difference in students' performance in introduction to computer (t = 4.56; p<.05). The null hypothesis was rejected. Table 8 shows that male had a higher mean performance in introduction to computers ($\bar{x}$ = 49.79) that their female counterparts ($\bar{x}$ = 45.46) statistical

comparison using independent t-test analysis showed a significant difference. This finding means that male undergraduate students has a higher performance in introduction to computer than their female counterparts.

b) **Age and Students' Achievement in Introduction to Computer.**

Table 9
One Way Analysis of Variance of Influence of Age on Undergraduate Students' Performance in Introduction in Introduction to Computers

Age	N	$\overline{X}$	SD	
Below 20 years	144	52.33	13.23	
21 – 30 years	788	46.77	14.69	
31 and above years	68	47.59	16.44	
Total	1000	47.62	14.73	
Source of variation	Sum of squares	Degree of freedom	Mean square	F
Between Groups	3773.11	2	1886.559	8.34*
Within groups	212893.51	997	213.534	
Total	216666.62	999		

*Significant at .05; critical F = 3.000

The result in Table 9 show a significant F-ratio of 8.34. This value was found to be greater than the critical F-ratio of 3.00 at .05 alpha level, given 2 and 997 degrees of freedom. The null hypothesis was rejected. A post hoc analysis using Fishers' LSD multiple comparison showed that undergraduates below 20 years outperformed their counterparts between ages 21 – 30 years (t = 4. 22; p<.05) and 31 year and above (t = 2.21; p<.05) see table 10. This result means that younger students performed better than older students in introduction to computer.

Table 10
Fishers' LSD Multiple Comparison Test Analysis of Influence of Age on Undergraduate Students' Performance in Introduction to Computers

Age	Below 20 (n = 144)	21 – 30 (n = 788)	31 above (n = 68)
Below 20	52.33a	5.57b	4.75
21 – 30	4.22*c	46.77	-.82
31 and above	2.21*	-0.44	47.59
	Msw = 213.534		

*P<.05
a. Group mean are along the principal diagonal
b. Differences between group means are above the diagonal
c. Fishers' (LSD) t – values are below the diagonal

c) Faculty of study and Achievement in Introduction to Computers

Table 11
One Way Analysis of Variance of Influence of Facility on Students Achievement in introduction to Computer

Faculty	N	X	SD	
Science	200	46.36	12.76	
Education	200	44.94	14.95	
Arts	200	47.04	17.61	
Management Science	200	49.04	14.65	
Medicine	200	50.74	12.51	
Total	1000	47.62	14.73	
Source of Variation	Sum of Square	Degree of Freedom	Mean of square	F
Between Group	4171.42	4	1042.856	4.88
Within Group	212495.20	995	213.563	
Total	216666.62	999		

*Significant at .05

Table 10 presents the result of the analysis of variance of influence of students' faculty of study on their achievement in introduction to computer. The obtained F-ratio was 4.83. this value was found to be greater than the critical F-ratio at 2.37. the null hypothesis was rejected. This result means that the students' faculty of study has a significant influence on undergraduate students' achievement in introduction to computer. Given the significant F-ratio, the multiple classification test analysis using fishers' LSD was done to locate the source of difference. The result is presented in Table 12

Table 12
Fishers/ LSD Multiple Comparison Test of Influence of Faculty on Students Achievement in Introduction to Computer

Faculty	Science (n = 200)	Education (n = 200)	Arts (n = 200)	Management Science (n = 200)	Medicine (n = 200)
Science	46.36[a]	1.42[b]	-.68	-2.68	-4.38
Education	0.97[c]	44.94	2.10	-4.10	-5.80
Arts	-0.47	1.44	47.04	-2.00	-3.70
Management Science	-1.84	2.81*	1.37	49.04	-1.70
Medicine	-3.21*	-3.97*	-2.53*	-1.16	50.74
		MSW = 213.563			

*Significant at .05

a. Group Means are placed on the principal diagonal
b. Difference between group means are above the diagonal
c. Fishers LSD t-value are below the diagonal

The result in table 11 show that students in the medicine faculty has significant higher mean achievement in introduction to computer than students from science(t = - 3.21; P<.05), education (t = - 3.97; P<.05), and Arts (t = - 2.53; P<.05). The pairwise comparison between management science students and education was also significant (t = 2.81; p<.05) other parwise comparison was non-significant. This finding means that students from medicine and management science faculties out performed others from other faculties.

Discussion

The result of hypothesis one shows that undergraduate students' attitude towards computer is significantly positive. The result of the analysis is consistent with the studies of Loyd and Gressand 1984 and Yushua, 2006; who found that subjects used had positive attitude towards computer. A plausible explanation for this study result is that the present generation are usually considered to master technological devices better than older generations. They adapt quickly to technology changes and feel at ease with new releases of softwares and hardwares hence, their positive attitude towards these devices may not be unconnected with the awareness and exposure to computers to which these students have had access to even before coming to school. In otherwords some of the student were computer literate having made use of the internet to send e-mails and done most of their assignments using computer. So, this frequent use of computers may have socialized them to view the computer favourably.

The result of the second hypothesis indicated that there is a significant positive relationship between students' attitude towards computer and their achievement in introduction to computer.

This study result lend credence to other study results in literature (Loyd & Gressard, 1984 Al-Rami, 1990, RaveLive, 2003, Yushua, 2006) that students who have positive attitude toward computer tend to do well in the subject, and students that have negative attitude towards computers tend to perform badly in the subject. Attitude affects people in everything they do and in fact reflects what they are, and hence a determining factor of people's performance at the task.

In most cases, positive attitude are interpreted as an indicator of programme success (Yushua2006).

The result of hypothesis three indicated that demographic variables of gender, age and faculty were found to significantly influence students' attitude towards computer. In respect of gender, this finding corroborates several study result which found that males have more positive attitude towards computers than females (Levin & Gordon, 1987; Sanders, 1993; Olecbukola, 1993; Shashaani, 1994; Brosman, 1998; Hint and Bohlum 1993; Teo & Hin, 1996; Avon, Qu, & Hazen 2000; Mitra, Laframe; Kadijevich, 2000, McCullough, 2001). However, this study result is inconsistent with other studies in literature of (Oyek & Smither, 1994; Jodman & Monaghan, 1994; Houle, 1996) which documents that the increased computer uses in schools and homes in the 1990s, especially with the widespread use of e-mail and internet studies have shown that the gap on attitudes toward computer between the genders has disappeared. The present study is consistent with early findings. Possible reasons for this state of affair include:

- Computers are considered by female to be part of a male culture.

- Computers are identified with mathematics and science and females see themselves as lacking basic abilities necessary to succeed in such tasks.
- Lack of access to computers by females.
- Sex-biased software which is designed to appeal to boys without considering that which may motivate girls in learning software creates more distance between girls and computer leaning. Lack of female-role model at home which may influence girl's self confidence that learning and working with computer are difficult tasks and that computers are masculine domains.
- Stereotyped games, games focused on violent examples and a lack of protagonists.
- Prior computer experience and nature of experience. More experience among males may account for males confidence from previous use.
- Purchase of computers by parents more for sons than for daughter (Greber,1990; Shashaari, 1994, P. 362.).

In respect of age the result showed that older the age of the undergraduate students, the more positive their attitudes are towards computer. The younger the students, the less positive their attitudes are towards computer. This study result corroborated the study results of Dyck, 1994. Dyck and Smither research indicated that older adults were less anxious, had more positive attitude towards computer, and had more liking for computer than younger adults (Dyck, 1994, P.239). this result could be explained by the fact that the older individuals have had the advantage and benefit of life experiences. In contrast, Honeynian and White (1987) as reported in Rina's research "Older learners were found to possess a higher negative attitude towards computers than younger learners" (Pina, 1994, P.3). Due to the close relationship to other variables such as experiences, gender and confidence level, there is much inconsistency in reporting result. The authors cautions, that there is a need for controlled research work in this area given the fact that different studies used different instrument.

When the issue of faculty influence on students attitude was considered, results showed that students from science faculty and medicine showed more positive attitude towards computer than arts education, and management sciences. A possible explanation for this study result, is the fact that computer belong to the sciences and it does not require a different reasoning mode like the arts etc. Computer like any science requires more spatial rather verbal abilities in its executions.

When students' achievement in introduction to computer were viewed in the light of gender, age and faculty of study, it was found that these variable significantly influence it. Males performed better than females in introduction to computer. It follows that a more positive attitude will engender good performances hence the superiority of males over the females. A different scenario appeared in respect of influence of age, on performance in introduction to computers, Younger students performed significantly higher than the older students in introduction to computer. A plausible reason for the scenario is that younger students are found to deal more with computers. Some students while waiting for admission into the university were sent to computer school by the parents as a strop in gap. This exposure puts the students at an advantage while studying introduction to computer in the university. In other words, their strong computer background accounts for their good performance in introduction to computer.

Recommendation

Based on the result of the study, the following recommendations are made as computer phobia reduction programme:

- Students will need to relax with and around computers, a clam, low stress atmosphere will benefit the learning student. Students (especially those with prior negative experience) will need to build confidence in order to change their attitude, help the student build confidence by providing successful experiences, especially in the early stages (Fajou, 1996). As their confidence level increases, the anxiety reduces, and their attitude will become more optimistic.
- Encourage students to explore; People need the opportunity to play before they gain confidence". Weil suggests "that schools, colleges and business allow students and employees to experiment with new computers and new software before they are incorporated into daily activities". (DeLoughry, 1993) this would allow the user the time to explore, "play", and feel comfortable. Another way to ease students into computer use is with educational games or word procession.
- Courses should stress that computer skills are acquirable, challenging and beneficial.
- Introduction to computers and computer allocation is best effected through interaction
- Hand-on experience. It was found that failing of subjects becomes less negative towards computer for those with hands on experience.

Conclusion

From this study, the conclusion was drawn thus: undergraduate students' attitude towards computer was significantly positive. There is a significant positive relationship between undergraduate students attitude towards computer and their performance in introduction to computer. Male undergraduates students have more positive attitude towards computer then their female counterparts. There is a significant influence of age on students attitude towards computers, and that the older the age of the students, the more positive their attitudes are towards computer. Students faculty of study has a significant influence on their attitude towards computer and students from science faculty have better attitude towards computer than their counterparts from arts, education and management sciences. Male undergraduate students have a higher performance in introduction to computers than their female counterparts. Younger students performed better than older students while students from medicine and management sciences out-performed others in introduction to computer.

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