

The Influence Of Computer Experience And Gender On Teacher Trainees' Attitudes Toward Information Communication Technology In Public Primary Teacher Training Colleges In Machakos County In Kenya.

John Musyimi Kilonzo¹ Samuel Mutweleli²

*1*Department Of Social Sciences, Kitui Teachers Training College, Kenya

*2*Department Of Educational Psychology, Kenyatta University, Kenya

Abstract:

This study sought to investigate the influence of computer experience and gender on teacher trainees' attitudes toward ICT in public primary teacher training colleges in Machakos County in Kenya. The objectives of the study were to determine the influence of experience on teacher trainees' type of attitude towards ICT in public teacher colleges in Machakos County in Kenya and to establish the influence of gender on attitude towards ICT among teacher trainees in public primary teacher training colleges in Machakos County in Kenya. The study was guided by B.F. Skinner's operant conditioning (1954) and the social learning theory of Albert Bandura (1971) theories. The study used descriptive survey and correlations designs. The target population of the study was 400 second year teacher trainees. The study used Krejcie and Morgan (1970) formulae and a criterion of 49% to select the sample size. Simple random sampling technique was used to choose five out of the ten second year streams of the college for the study. The study used a self-administered questionnaire to collect data from teacher trainees. The study used the test-retest approach to determine the reliability of the instrument during piloting. The research tool's Cronbach's alpha was 0.76. The Statistical Package for Social Sciences (SPSS 26) was used to analyze the data using descriptive statistics. The study might be significant to the policymakers because its findings, which emphasize the need to include ICT in national Primary Teacher Examinations. This will encourage students to take the subject more seriously and shed their anti-computer sentiments. The study found that, teacher trainees' positive attitudes toward computers were influenced by their duration of computer experience, although gender and their concentration in the sciences or the arts had little bearing on this. Therefore, this study recommends that there should be national examinations for the ICT subject to encourage all trainees to learn ICT more seriously than before.

Keyword: *Computer, Experience, Teacher trainees, Attitudes, Information Communication Technology*

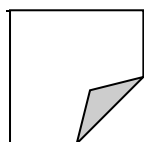
Date of Submission: 17-04-2024

Date of Acceptance: 27-04-2024

I. Introduction

According to an assessment of literature in this area, the most significant element influencing attitudes toward ICT is computer experience. Opuku and Kurachie (2014) did a study on the abilities, attitudes and perceptions regarding using computer technology in the classroom among elementary, middle and secondary education programs at Marquette University in the Midwest of the United States. The study used self-assessment survey to collect data from 205 students. The study found that, about 86 percent of pre-service student teachers enrolling in introductory education courses believed that, they had prior experience with computer software applications in comparison to the novice group, who experienced computer anxiety, they exhibited more positive attitudes regarding computers. from were given the of (Opuku and Kurachie (2014).

Samson (2013) found that computer expertise had a beneficial impact on computer confidence and attitudes in research carried out in Israel with 309 students in grades 7 through 12 from eleven non-vocational schools. Hany (2023) found that prolonged computer use will result in positive feelings. Teo (2008) study found that the duration of using ICT was positively connected with one's computer confidence and a favorable attitude towards the technology. Survey respondents had been using computers on average for 9.63 years (SD = 3.27). Yusuf (2008) study found that students had positive attitudes towards computers in Nigeria. Over 60% of them stated that they acquired their computer knowledge and skills outside of the classroom through personal training, family, and friends. This happened because the ICT program at the university was both too general and inadequate to meet their needs.



In a Kenyan study Wambiri and Ndani (2016) established that younger teachers, those 40 years and less, had more positive attitudes and beliefs about the value of computers than older teachers did. This was because, in contrast to the older teachers, the younger teachers had been trained on ICT while in colleges and had additional practice using computers or associated devices on a regular basis. The results of this study suggest that younger teachers had a more positive opinion of ICT than older teachers because they had more experience with computers and related technologies. The current study also looked at the impact of trainees' experiences on ICT attitude, as a result, their positive or negative computer attitude was taken into account in relation to their level of computer proficiency.

The issue of how gender influences people's attitudes about ICT has also been looked at in this study. This is a result of the wide range of study findings on the subject. Disparities in attitudes about ICT between genders have been found by several researches. Bebetos and Antoniou (2008) found statistically significant gender disparities in the ICT views of men and women, even though the majority of them owned personal computers and utilized computers for school-related purposes. Oguz (2016) did a study on ICT attitudes among physical education students at a Greek university. The 21-item CAS questionnaire with four components was completed by a sample of 165 first-year students, 93 of whom were men and 72 were women. The study found that, the male participants showed a higher inclination towards computers and perceived them as more valuable than the female participants. Additionally, the study found that, there was no variations in views about ICT between genders. According to Yusuf (2008) there was no significant difference found between the responses from male and female respondents in a survey study conducted in Nigeria on the computer attitude and proficiency of student-teachers. Teo (2008) conducted a study in Singapore. The study found that, there were no gender differences in the ICT attitudes of these students.

Derbyshire (2003) observed that in African schools, where computer sharing is common and unrestricted, boys usually have more access than girls due to their tendency to be more assertive and self-assured. ICT classes in public teaching colleges in Kenya are attended by both male and female trainees and sharing of computers in the lab is a typical practice.

II. Material And Methods

The study used descriptive survey and correlations designs. The target population of the study was 400 second year teacher trainees. The study used Krejcie and Morgan (1970) formulae and a criterion of 49% to select the sample size. Simple random sampling technique was used to choose five out of the ten second year streams of the colleges for the study. The study used a self-administered questionnaire to collect data from teacher trainees. The study used the test-retest approach to determine the reliability of the instrument during piloting. The research tool's Cronbach's alpha was 0.76. The Statistical Package for Social Sciences (SPSS 26) was to analyze data using descriptive statistics.

III. Results

The influence of experience on teacher trainees' type of attitude towards ICT

The objective of the study was to determine how much computer experience influence teacher trainees' attitudes toward ICT. This was accomplished by comparing the length of computer experience of distinct trainee groups to their attitude toward computers, either positive or negative, as determined by the demographic data. The student-teachers specified how long they had been using computers by selecting either less than two years or two to six years. The details are shown in table 1.

Table 1: Years of Using Computers and type of attitude Towards ICT

		Type of attitude Towards ICT		Total	
		Negative	Positive		
Years using Computers	Less than 2	Count	6	53	59
		% of Total	3.7%	32.3%	36.0%
	2-6	Count	5	99	104
		% of Total	3.0%	60.4%	63.4%
	No Response	Count	0	1	1
		% of Total	0.0%	0.6%	0.6%
Total		Count	11	153	164
		% of Total	6.7%	93.3%	100.0%

According to the findings in table 1, 60.4% of respondents with positive attitudes had used computers for two to six years or more, compared to 32.3% of respondents with positive attitudes who had used computers for less than two years. The study also investigated on the mean attitude Score in relation to computer experience. Table 2 provides data.

Table 2: Mean Attitude Score and Years of Using Computers

Attitude Score	Years using Computers	N	Mean	Std. Deviation
	Less than 2	59	76.2881	10.10301
2-6	104	82.6538	10.53406	

The findings showed that respondents with between 2 and 6 years of computer use had a more positive attitude toward using ICT on average (M= 82.65, SD= 10.53) than respondents with less than 2 years of experience (M= 76.28, SD= 10.10). Table 3 displays the results of an Independent Samples t-test on the same.

Based on years of computer experience, results in table 3 shows that, there were significant differences in the means of attitudes toward ICT ($t=-3.76$, $df=161$, $p 0.05$). The responders with more years of computer experience benefited from this disparity. This provided evidence that the attitudes of teacher trainees towards ICT varied significantly according to their prior computer experience and provided a response to the question of whether prior computer experience affects student-teachers attitudes toward ICT.

Gender influences on teacher trainees' attitude towards ICT

The investigation of how much gender influence teacher trainees' attitudes toward ICT was investigated. To address the issue, the researcher compared the scores for attitude of the female responders to those of the male participants. Table 4 shows a comparison between the two.

Results in table 4 indicates that, majority of respondents (61.0%) with a positive attitude were female, as opposed to the respondents who were male (32.3%). As a result, there were more females than males with a favorable attitude. This may be explained by the fact that there were more female respondents 64.3% of the total than male respondents 35.7%. Further the study collected data on the mean attitude score in regard to the gender of respondents. Table 5 provides information.

IV. Discussion

The findings in table 1 of this study indicated that, trainees' extensive computer experience led to their positive computer attitude. In comparison to the respondents with favorable attitudes from the group of respondents with less than two years of experience, nearly two thirds of the respondents with positive attitudes had used computers between two and six years. This demonstrates that trainees' overall computer attitude be it positive or negative, is considerably influenced by the length of their computer experience. These findings were supported by Opuku and Kurachie (2014) who found that about 86% of student-teachers enrolled in introductory courses in education at Marquette University in Midwest USA with previous experience in computer software applications had more positive attitudes towards computers compared to the novice group who had computer phobia. Further, Teo (2008) support the findings of this study. According to him the duration of utilizing ICT was positively connected with computer confidence and a favourable attitude. Respondents had a positive attitude to computers which they had used on average for 9.63 years (SD=3.27). The findings are further supported by Samson (2013) who found that, computer expertise had a favorable impact on computer confidence and attitudes. Wambiri and Ndani (2016) also support the findings of this study. They found that, compared to older teachers of lower primary school, younger teachers and those aged 40 years and below, had more positive beliefs and attitudes on the usefulness of computers. This was because, unlike the older teachers, they had received ICT training while in college and had more practice using computers or computer related gadgets more often than the older teachers.

Regarding the implications of differences in attitudes toward ICT across the genders of respondents, results in table 6 shows that, there were none that were statistically significant ($t=-.456$, $df=162$, $p > 0.05$). These findings are in agreement with those of Teo (2008) who found that, there were no gender differences in attitudes toward information and communication technology among Singaporean student-teachers in the education field. On the contrary, Bebetos and Antoniou (2008) who found statistically evident gender disparities in computer attitude between the male and female. According to the results, computers were more appealing to and useful to the male than to the female.

V. Conclusions

Based on the fore discussed findings, the study came up with the following conclusions: First of all, majority (93.3%) of teacher trainees had a positive attitude towards ICT, compared to (6.7%) who had a negative view. While the results indicate that trainees' length of computer experience contributed to their positive attitude toward computers, their specialization in the sciences or the arts had no bearing on it. Likewise, there were no gender disparities in attitudes toward ICT among teacher trainees. Majority of trainees said that ICT teachers' persistent efforts to convince students of the benefits of ICT was the primary intervention strategy utilized to foster good attitudes toward ICT in the institution.

References

- [1] Bebetos, E., & Antoniou, P. (2008). University Student's Differences On Attitudes Towards Computer Use: Comparison With Student's Attitudes Towards Physical Activity. *Interactive Educational Multimedia* (17), 20-28.
- [2] Derbyshire, H. (2003). Gender Issues In The Use Of Computers In Education In Africa. [Http://Www.Enawa.Org/Icons/Tekstbestanden /Gender%20report%20in%20the%20use%20of%20computers%20in%20africa.Html](http://www.enawa.org/icons/tekstbestanden/Gender%20report%20in%20the%20use%20of%20computers%20in%20africa.html).
- [3] Hany, F. & Dyah, S. (2023). Teachers' Competencies And Students Attitudes Toward Ict At An Efl Secondary School. *Turkish Online Journal Of Distance Education*, 24 (3), 1302-6488.
- [4] Krejcie, R. V., Morgan, D., W. (1970). Determining Sample Size For Research Activities. *Educational And Psychological Measurement*, 30, 607-610.
- [5] Opuku, M. M., & Kurachie, A. (2014). Understanding Student Attitude Towards Computer Education. A Survey Of Senior High Schools In Suyani Municipality. *Academic Journal Of Interdisciplinary Studies*, 3 (1), 11-18.
- [6] Samson, R. V. (2013). Teacher Trainees Attitude Towards Ict. *Journal Of Education And Practice*, 4 (19), 125-146.
- [7] Teo, T. (2008). Pre-Service Teachers' Attitudes Towards Computer Use: A Singapore Survey. *Australasian Journal Of Educational Technology*, 24(4), 413-424.
- [8] Wambiri, G., & Ndani, M., N., (2016). Kenya Primary School Teachers' Preparation In Ict Teaching: Teacher Beliefs, Attitudes, Self-Efficacy, Computer Competence, And Age. *African Journal Of Teacher Education*, 5(1), 1-14. 3515-Article Text-20664-1-10-20170121.Pdf

