



Role of gender in deciding attitude towards computer technology

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Abstract

The computer is one of the most brilliant gift of science. Many of the routine activities today at home, in business and in field of education are done by computers. For school student's access to computer at school is important. The computer has become the new pencil and paper for present education system and it is becoming an essential part in school level curriculum. Therefore it is important to study attitude towards computer. According to Devine and Wilson (1997), developing positive attitude among students is more critical than merely increasing student's computer skill because positive attitude automatically lead to the learning of computer skill. Gender is also one of the factor in developing attitude for using computers because male and female students may differ in their perception of the role of computer in education. To promote the computer literacy effectively, a balance between the development of computing skill and encouraging positive attitude towards computer's utilization to a greater extent is needed. In present study, Descriptive Survey Method has been employed.

A sample of 100 secondary school students (50 from each gender) was selected from 4 secondary schools of Meerut city through purposive sampling but final sample was selected through random sampling. Computer Attitude scale developed by Khatoon & Sharma (2000) was used to collect the data. Mean, Standard deviation and t-test were used as statistical techniques to analyse the data. It can be concluded on the basis of findings that students have no difference in attitude towards computer on the basis of gender and thus gender does not impact the computer literacy and it's usage.

Keywords: computer literacy, attitude towards computer, gender role, computer skill, difference in attitude

Introduction

The computer is one of the most brilliant gift of science. Many of the routine activities today at home, in business and in field of education are done by computers. The computer has been proved as a friend and servant of science. Most of the offices, shops, factories and industries use computers. Use of computers reduced the paper work. Traffic in large cities is controlled by computer. Ticketing and reservation have become more efficient and convenient. The use of computers in educational system has been acknowledged since decades and it has been found that it affects learner's capabilities in positive way.

The state government and the central government have put special emphasis on computer education in India. For secondary school students access to computer at school is important. While most students are comfortable using the computer, those who do not have at home are at disadvantage for completing assignment. Today in field of education, the computer has become the new pencil and paper as such computer is becoming an essential part in secondary school level curriculum. Therefore, it is important to study attitude towards computer. In the academic settings, the success of computer system is largely dependent upon the attitude of teachers and students. According to Devine and Wilson (1997) [6], developing positive attitude among students is more critical than merely increasing student's computer skill because positive attitude automatically lead to the learning of computer skill. Gender is also one of the factor in developing attitude for using computers. Male and female students may differ in their perception of the role of computer in education. In reporting on the benefits occurring from the use of computer, indeed all students feel that computer make learning easier and accessible. Students feel that it is easy to access library and research source by

using computer and different software. The new technology has increased the productivity of students. Garland and Noyse (2005) pointed out that in the educational context confidence should lead to more positive attitude towards computer and this will enhance learning and associated activities. Mitra and Steffensmer (2000) reported that networking learning institutions where students have easy access to computers could foster positive attitude towards the use of computer in learning and teaching. Whitrow (1999) [18] mentioned that the primary goal behind the implementation of computer in education is the utilization of them by the students. The attitude towards the computer may differ with respect to gender. Gender here refers to the socially constructed roles, behaviour, activities and attributes that a given society considers appropriate for men and women. Male and female students may differ in their perception of the role of computer in education. As such, it is important to find out the effect of gender on attitude towards computer.

Rationale of the Study

The effect of exposure to computer technology and the idea that men and women differ with regard to their interest in and reaction to technology has received increasing attention among educators and scholars. Men are reportedly more interested in mastering computer commands and want computers with voice recognition and features that extend their senses. Women want to able to use the machines; men want to command the machines. Early literature from the 1980s indicates the more positive attitudes towards computer technology among males. Recommendations from those studies suggested increased exposure for females and identified specific ways to change the attitudes of females. At present, computers have emerged in schools at all levels

in increasing numbers. As a result, current students have had far more exposure to the computer than the subjects studied in the 1980s. This is substantiated by several research findings.

Computer simulations, multimedia materials, and CD-ROMs have increased as well, but not as rapidly. This increase in exposure should be reviewed to determine if there has been an accompanying change in attitude between the gender. Early studies of elementary and high school students identified an apparent dominance of males with regard to computer use and positive attitudes about the computer. An explanation for this gender difference may have evolved because computers were identified with math and science; and females saw themselves as lacking basic abilities necessary to succeed in such environment.

Over the years, gender issues related to various academic specialties have been debated in the literature. Sacks, Bellisimo, & Mergendoller (1993-94) ^[15] concluded that male attitudes about computers were stable across their experiment and that change would not be expected because the males have been socialized by a society that encourages males to be proficient in all technological issues. Females, on the other hand, have not been so encouraged; but when they are provided with computer instruction and experience, their attitudes and behaviors are not different from males. The purpose of this study is to contribute to a better understanding of the current status of men’s and women’s attitudes towards computer. Such knowledge may affect educators’ recommendations to students regarding course, program and career selection.

Variables of the Study

Variables of present study are as under-

1. Dependant variable- Attitude towards computer
2. Independent variables- Gender

Methodology of the Study

Descriptive survey method was used for this study.

Sample

- Purposive method of sampling was used for school selection.
- Only U.P Board affiliated Schools were taken.
- Out of the 4 Schools Random sampling method was adopted for final sample.

Sample Size

50 boys and 50 girls students were selected from Secondary Schools of Meerut city only.

Tool Used

Computer attitude scale developed by Khatoon and Sharma (2000) was used to assess the attitude of students towards computer.

Objectives of the Study

The objectives of the present study are:

1. To study attitude of secondary school students towards the computer.
2. To see the effect of gender on attitude towards computer.

In the present study, null hypothesis was formed.

1. To Study Attitude of Secondary School Students Towards Computer

In order to study attitude of secondary school students towards computer, the researcher divided the male and female students into three categories. First category contains students with positive attitude, second category contains students with neutral attitude and third category contains students with negative attitude. The mean and percentage of these categories in case of male and female students calculated are shown in the table 1.1 and table 1.2 respectively.

Table 1: Mean and Percentage of three categories in case of Male Students

GENDER	ATTITUDE TOWARDS COMPUTER					
	Positive (N=15)		Neutral (N=21)		Negative (N=14)	
MALE (N=50)	Mean	Percentage	Mean	Percentage	Mean	Percentage
		73	30	60.09	42	48.5

Table 2: Mean and Percentage of three categories in case of Female Students

GENDER	ATTITUDE TOWARDS COMPUTER					
	Positive (N=17)		Neutral (N=20)		Negative (N=13)	
FEMALE (N=50)	Mean	percentage	mean	Percentage	Mean	Percentage
		74.06	34	59.55	40	48.41

The above tables shows that the mean of male students with positive attitude is 73 and percentage is 30. Similarly, for female students mean is 74.06 and percentage 34. In case of neutral category mean of male students is 60.09 and percentage is 42 and for female students the mean is 59.55 and percentage is 40. In case of negative category the mean of male students is 48.5 and percentage is 28 and for females the mean is 48.41 and percentage is 26. The mean values clearly reveal that both the gender have high mean values in positive attitude category which indicates that both the genders are receptive towards the use of computers.

2. To See the Effect of Gender on Attitude Towards Computer

To see the effect of gender on attitude of Secondary School Students towards computer in relation to categories 32 Students with positive attitude, 41 students with neutral attitude and 27 students with negative attitude were taken and mean, standard deviation, critical ratio value were calculated which are shown in the table given below:

Table 3: Mean and S.D of three categories with respect to gender

GENDER	ATTITUDE TOWARDS COMPUTER					
	Positive (32)		Neutral (41)		Negative (27)	
	Mean	S.D	Mean	S.D		S.D
MALE	73	4.44	60.09	1.64	48.5	4.70
FEMALE	74.06	5.25	59.55	1.79	48.41	4.79
t value	0.62 (not significant)		1.01 (not significant)		0.05 (not significant)	

The mean values clearly indicates that the female students have more positive attitude towards the computer in comparison to male students but the difference is insignificant which states that now females are also equally exposed to computer education and almost equally skilful to use it.

It is clearly evident from the table that the t-value for positive attitude students with respect to gender is 0.62 which is lesser than the tabulated t-value at 0.05 and 0.01 significance level. Thus, it can be said that hypothesis is accepted or we can say that there is no significance difference between the attitude of Secondary School students with respect to gender in case of positive attitude category. In case of Students with Neutral attitude the calculated t-value is 1.01 which is less than the tabulated t-value at 0.05 and 0.01 significance level. Thus it can be said that hypothesis is accepted or we can say that there is no significance difference between the attitudes of Secondary School students with respect to gender. Similarly in case of Students with Negative attitude the calculated t-value is 0.05

which is less than the tabulated t-value at 0.05 and 0.01 significance level.

The result can be supported by an earlier study by Bush (1995) who investigated gender differences regarding computer attitudes and perceived self-efficacy in the use of computers among 147 college students. At the end of a computer course, the students completed a questionnaire designed to measure self-efficacy, computer anxiety, computer liking, and computer confidence. No gender differences were found in computer attitudes or self-efficacy regarding simple computer tasks. Male students previously had more computer experience in programming and computer games and reported that they previously had more encouragement from parents and friends.

To compare attitude of Secondary School students towards computers in relation to gender and to see the effect of gender on attitude towards the computer, mean, standard deviation, critical ratio as a whole irrespective of the categories were calculated which are shown in the table below:

Table 4: Mean and S.D of the male and female students

GENDER	N	MEAN	S.D	CRITICAL RATIO	SIGNIFICANCE LEVEL
MALE	50	61.04	9.72	0.31	Insignificant at .05 level
FEMALE	50	61.68	10.89		

It is clearly evident from the table that mean score of male students is 61.04 and mean score of female students is 61.68. Similarly, Standard deviation for male students is 9.72 and for female students standard deviation is 10.89. For these groups calculated critical ratio value is 0.31 which is not significant therefore the hypothesis is accepted. Thus we can say that there is no significant difference between the attitude of male Students and female Students towards Computer. The result indicates that there is no effect of gender on the attitude of students towards computer. The perception towards the relevance of computer education in today's world does not change with respect to gender. Both genders know the need of computer knowledge and they are equally willing to learn the computer skill.

Similar result was found in a study by Shashaani and Khalili (2001) [13]. This study surveyed attitudes about computers among 375 Iranian undergraduate students (155 males and 220 females). They found significant gender differences with respect to confidence about computers and stereotypic views of computer users. There were no significant gender differences in respondents' liking for computers or their perceptions of the usefulness of computers.

Conclusion

This research attempted to determine whether male and female secondary school students exposed to similar environment and technology use for practical applications differ in their attitude about computer. The researcher found that there is no significant difference between attitude of male and female Students of Secondary level towards

Computer. Also, gender has no effect on the attitude of students towards computer which states that both male and female students have almost equal kind of attitude towards the computers. This may be due to the fact that now-a-days both either male or female are getting equal exposure to computer and other kind of technologies. They are getting similar facilities and educational opportunities. Although females have been seen as being less receptive to technology than males, recent experimental evidences and increased computer use suggest that this condition may no longer exist. Increased access to computers for all students has provided an environment where gender differences could disappear. Hence this study is a counter-indicative to previous notion or theory of male-dominance in the area of technology. Now, both male and females students are familiar to the computer and they realize it as a beneficial tool for the future. Similar result was found in study by Dr. Nabeel Abedalaziz, Dr. Shahrir Jamaluddin and Dr. Chin Hai Leng (2013) [2] in which no significant differences were found between participants' attitudes toward the Internet and computer related with gender, field of study, and ethnicity.

The results carry implications for both education and business. Educators, trainers, and managers should re-examine their behavior as they make decisions regarding career choices, on-the-job training opportunities, and job placement. Previous indicators that men are more receptive to technology in learning and training environments appear to have changed.

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