

ROLE OF STUDENTS' ATTITUDE TOWARDS COMPUTER EDUCATION IN RELATION TO THEIR SCHOLASTIC ACHIEVEMENT

Dr. Rajesh E.B.

Principal, Cauvery B.Ed. College, Bengaluru-560 092

ABSTRACT

The purpose of this investigation is to examine the relationship between Students' Attitude towards Computer Education and Scholastic Achievement of secondary schools of Bengaluru District, Karnataka. The current research was followed by descriptive survey method and quantitative approach as the substantial method of the study. In a quantitative method, the researcher collect, analyze and interpret the varied types of numerical data obtained from the respondents. A sample of 150 secondary school students belonging to Bengaluru district was selected using stratified random sampling technique. Data was collected through Scholastic Achievement of students was taken from the office records of their respective schools and Computer Attitude Scale (CAS) by Tahira Khatoon and Manika Sharma was used to assess the attitude towards computer education of the secondary school students along with personal proforma. The collected data was calculated through 'r' test, 't' test and One-Way ANOVA and the level of significance was fixed at 0.05 confidence level. From the present study, the 'r' analysis result shows that there was a significant positive relationship between Scholastic Achievement of secondary school students and their attitude towards computer education; 't' test results shows that there was a significant difference in the Scholastic Achievement of secondary school boys and girls and the 'F' test analysis results shows that there exists significant difference in the Scholastic Achievement of secondary school students having low, moderate and high attitude levels towards computer education. This is confirmed that students who had higher level of attitude towards computer education had higher scholastic achievement than students who had moderate and low levels of attitudes. Hence, a positive attitude towards computer need to be developed among students and the initiation should start from the beginning of the school education. Therefore, teachers and teacher educators need to inculcate the computer attitude among students as it is very much essential for the present-day scientific and technological world.

Keywords: Scholastic Achievement, Attitude, Computer Education, School Students.

INTRODUCTION

Student attitudes refer to the feelings, beliefs, and perceptions that students have towards their education, school, teachers, and themselves as learners. These attitudes can include things like motivation, engagement, self-esteem, and self-efficacy. Student attitudes are important because they can greatly impact a student's academic performance and overall success in school. Positive attitudes can lead to increased motivation, engagement, and self-esteem, which can help students learn and retain new information more effectively and efficiently. Positive attitudes also make the learning experience more enjoyable, which can increase a student's engagement and motivation.

On the other hand, negative attitudes can lead to decreased motivation, engagement, and self-esteem, which can negatively impact a student's academic performance and overall success in school. Negative attitudes can also make the learning experience less enjoyable, which can decrease a student's engagement and motivation. Additionally, Student attitudes also play a key role in their mental and emotional well-being, for example, if students have positive attitudes towards school, they are likely to have less stress and more self-confidence, which can lead to better mental and emotional well-being.

Scholastic achievement refers to the academic progress and success of a student, as measured through grades, test scores, and other forms of assessment. It is an indicator of how well a student is mastering the material and meeting the standards set by the school or educational system. Scholastic achievement is important for a number of reasons. Firstly, it is often used as a measure of a student's intelligence, work ethic, and potential for success. High levels of scholastic achievement can open doors to higher education and future career opportunities. Many colleges and universities have academic requirements for admission, and scholastic achievement can play a significant role in determining whether a student is accepted into their desired program. Furthermore, scholastic achievement is also an indicator of the effectiveness of a school or teacher in providing students with a quality education. It can be used to evaluate and improve the education system, and to identify and address areas of concern. Additionally, achieving academically can help students to build a sense of accomplishment and self-worth, which can motivate them to continue working hard and striving for success in the future.

Student attitudes play a significant role in relation to their scholastic achievement. Positive attitudes, such as motivation, engagement, and self-efficacy, can lead to increased scholastic achievement. When students have a positive attitude towards their education and themselves as learners, they are more likely to be motivated to learn, engaged in the material, and confident in their ability to succeed. This can result in better academic performance and a higher level of scholastic achievement. On the other hand, negative attitudes, such as lack of motivation, disengagement, and low self-esteem, can lead to decreased scholastic achievement. When students have a negative attitude towards their education and themselves as learners, they are less likely to be motivated to learn, engaged in the material, and confident in their ability to succeed. This can result in poor academic performance and a lower level of scholastic achievement. Moreover, positive attitudes can lead to better study habits, which can also contribute to

increased scholastic achievement. For example, students with a positive attitude towards learning are more likely to set and work towards academic goals, use effective study strategies, and seek help when needed.

The attitude of students towards computer education has been a topic of interest for researchers. Several studies have investigated this topic using different methods and variables. Based on the provided search results, we can conclude that the majority of students have knowledge and access to computers (Sridevi, 2017). However, access to computers at home is not universal. Moreover, female students have a more positive attitude towards computer education than their male counterparts (Osman and Kuranchie, 2014).

The use of technology, including computers, can improve students' attitudes towards learning by maximizing their experience of success. Additionally, computer-based education has been found to enhance academic achievement (Salih Usun, 2004). In a study investigating the attitudes of students towards computers and its new trends, individualized instruction and the role of technology in the learning and teaching process were determined (Tripathi and Maity, 2019). Computer has made its way in each walk of our life. It is one of the most powerful tools ever designed by man to solve the problem. Almost all of us are involved, in some fashion, with computers on a daily basis.

Various factors have been found to influence students' attitudes towards computer education, including education level of their fathers, access to computers at home, computer education, and academic performance. It is important to note that the design of computer-based education programs can also affect students' attitudes towards computer education. The attitude of students towards computer education has been investigated by several studies. Factors such as access to computers at home, gender, academic performance, and the design of computer-based education programs can influence students' attitudes towards computer education. However, the use of technology, including computers, can improve students' attitudes towards learning by maximizing their experience of success.

REVIEW OF RELATED LITERATURE

Tripathi and Maity (2019) analysed the attitude of Student's toward Learning Computer in Secondary School. The study shows that, there was no significant difference of attitude towards computer among boys and girls students; there was no significant differences between computer education and attitude.

Abdullah et al. (2015) evaluated the students' attitudes towards information technology (IT) and the relationship with their academic achievement. The research outcomes shows that there was no statistically significant correlation between students' academic achievement and their attitudes towards IT.

Ariffin, Nordin and Karim (2012) studied on status of computer use and attitudes among secondary school students. It was found that there exist moderate to strong relationships between computer attitudes and academic achievement, Regression analyses have identified confidence in using computers as the strongest predictors of academic performance.

Ibrahim M. Al-Jabri (2012) examined the gender differences in computer attitudes among secondary school students in Saudi Arabia. The results reveal that male students are less anxious about learning and using computers, more confident in their ability to use and learn about computers, and like or enjoy working with computers more than female students.

Vidhyageetha and Padma (2012) investigated on to study the relation between achievement in computer science and the students' attitude towards computer. The relation between the academic achievement and students' attitude towards computer was found.

NEED AND IMPORTANCE OF RESEARCH

Technology has impact on education with today's contemporary term as Educational Technology. Educational Technology is the combination of hardware and software applications in order to solve educational problems. Therefore; technology and computers are part of the educational technology as a implementation of technology into education. Technology in education as computers and computer base systems requires and concentrates to the how students can learn effectively. Technology and computers reflect support for new instructional approaches and create cooperative learning and shared intelligence (Roblyer, et. al., 2000). Constructivist perspective also reflects and requires the role of the technology importance in education. There are many components of computer that facilitate the easy, stable and meaningful learning of students (Duffy, et. al., 1992).

There is a concrete role of computers in society and schools. It is discussable about bringing to educational change through computer developments. Computers provide work speed, work efficiency, work power and removal of human error from work activities. With these brief facilities, it is understandable that computers and high information technology effect the students' learning and studying. It is questionable how effectively affect and what are the attitudes of students toward computer role in education (Maddux, et. al., 1997). Computer-based learning is a new and contemporary trend that has wide range of affections in education. It has an effect on education by influencing the students learning as productivity tools of technology. By computer and its application, wider tools; students can catch stable, contemporary knowledge with its alternative standards. Because of that, the aim of this research was defined as to make awareness of new trends and tendency about computer and its effects in education as being support of student's meaningful learning. Attitudes towards technology can be determined through knowing the attitudes about computer in educational cycle.

There is a growing body of research that suggests that students' attitudes towards computer education can have a significant impact on their academic achievement in this area. Positive attitudes towards computer education have been associated with higher levels of engagement, motivation, and interest in the subject, which in turn can lead to better academic performance. On the other hand, negative attitudes towards computer education can lead to disengagement, lack of motivation, and lower academic achievement. Several factors can influence students' attitudes towards computer education, including their prior experience with technology, their level of self-efficacy, and the quality of instruction and resources available to them. To improve students' attitudes towards computer education and enhance their academic achievement in this area, educators may need to

consider a range of strategies, such as providing engaging and relevant instruction, promoting positive attitudes and beliefs about technology, and offering opportunities for hands-on learning and exploration.

STATEMENT OF THE PROBLEM

The purpose of this investigation is to examine the Scholastic Achievement of Secondary School Students in relation to their Attitude towards Computer Education. The topic identified for the current investigation is: "Role of Students' Attitude towards Computer Education in Relation to their Scholastic Achievement."

OBJECTIVES OF THE STUDY

1. To find out the relationship between Scholastic Achievement of secondary school students and their attitude towards computer education.
2. To find out the significant differences in the Scholastic Achievement of secondary school boys and girls.
3. To find out the significant differences in the Scholastic Achievement of secondary school students having different attitude levels towards computer education.

RESEARCH HYPOTHESES

Following are the hypotheses guided the study:

1. There is no significant relationship between Scholastic Achievement of secondary school students and their attitude towards computer education.
2. There is no significant difference in the Scholastic Achievement of secondary school boys and girls.
3. There is no significant difference in the Scholastic Achievement of secondary school students having low, moderate and high attitude levels towards computer education.

METHODOLOGY

The purpose of this investigation is to examine the relationship between Students' Attitude towards Computer Education and Scholastic Achievement of secondary school students of Bengaluru District, Karnataka. The current research was followed by descriptive survey method and quantitative approach as the substantial method of the study. In a quantitative method, the researcher collect, analyze and interpret varied kinds of numerical data obtained from the subjects. A sample of 150 secondary school students belonging to Bengaluru district was selected using stratified random sampling technique. Data was collected through Scholastic Achievement of students was taken from the office records of their respective schools and Computer Attitude Scale (CAS) by Tahira Khatoon and Manika Sharma was used to assess the attitude towards computer education of the secondary school students along with personal proforma. The collected data was calculated through 'r' test, 't' test and One-Way ANOVA and the level of significance was fixed at 0.05 level of confidence.

ANALYSIS AND INTERPRETATION OF DATA

Table-1: Table shows 'r' value results related to Scholastic Achievement and Attitude towards Computer Education (N=150; df=148).

Variables	Mean	Standard Deviation	'r' value	Sig.
Attitude towards Computer Education	60.500	16.347	0.465	*
Scholastic Achievement	73.760	12.684		

* Significant at 0.05 level.

From the above table-1 shows correlation results related to Scholastic Achievement and Attitude towards Computer Education of secondary school students. The obtained 'r' value 0.465 which shows a significant positive relationship at 0.05 level ('r' critical value 0.159) between Scholastic Achievement and Attitude towards Computer Education of secondary school students. Hence, the stated null hypothesis is rejected and an alternative hypothesis has been formulated that "there is significant positive relationship between Scholastic Achievement and attitude towards computer education of secondary school students." It concludes that students with favourable attitude towards computer education had higher scholastic achievement and vice versa.

Table 2: Table showing Number, Mean Scores, Standard Deviation, 't' value and level of significance of Scholastic Achievement of secondary school boys and girls.

Variable	Groups	No.	Mean Scores	Standard Deviation	't' value and sig. level	Sig. P value
Gender	Boys	75	77.960	11.640	4.28	*
	Girls	75	69.560	12.358		

*Significant at 0.05 level

The table-2 shows the number, mean scores, standard deviation, 't' value and level of significance of Scholastic Achievement of secondary school boys and girls. The said table also seen that the obtained 't' value 4.28 which is greater than the table value of 1.98 (df=148) at 0.05 level and thus it is significant at 0.05 level. Hence, the null hypothesis is rejected and an alternative hypothesis has been formulated that "there is a significant difference in the Scholastic Achievement of secondary school boys and girls." The scholastic achievement mean scores of boys (M=77.960) had more than the mean scores of girls (M=69.560). It concludes that secondary school boys had better achievement in scholastic than girls.

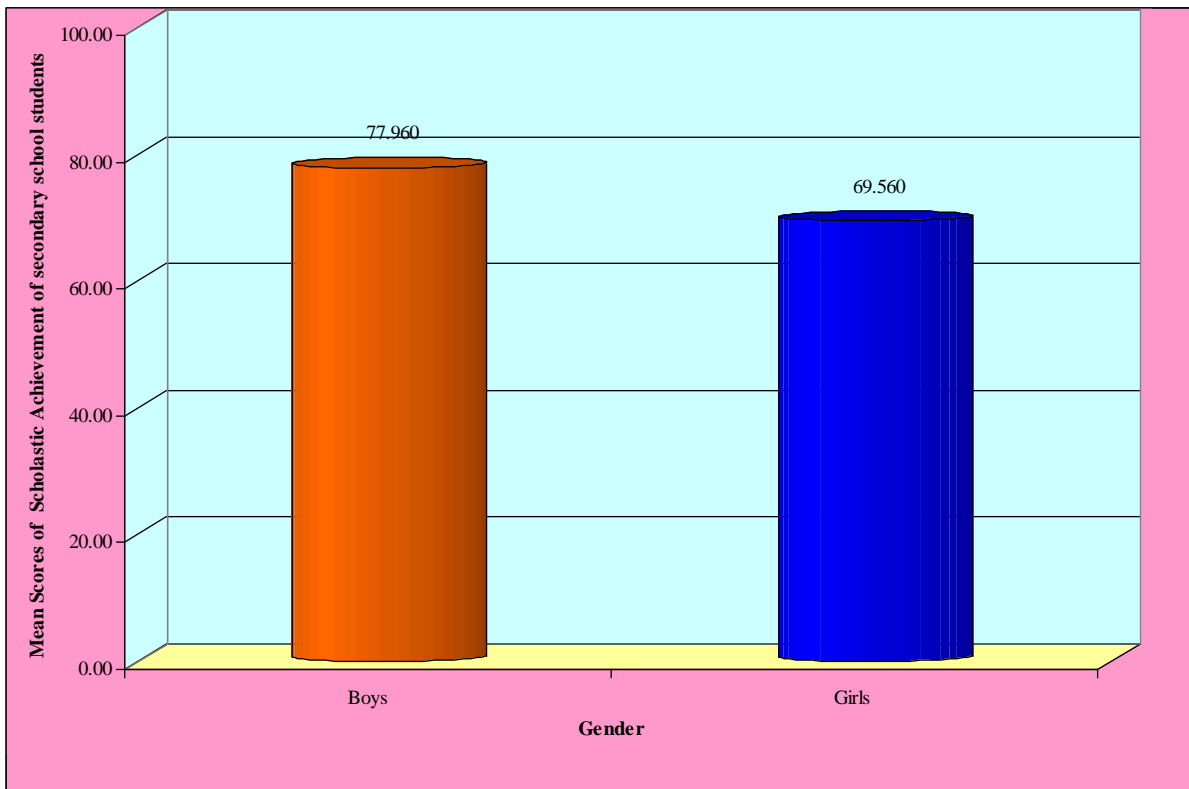


Fig.1 : Bar graph showing comparison of Scholastic Achievement of secondary school students with respect to gender.

Table-3: Scholastic Achievement of secondary school students with respect to different levels of attitude towards computer education.

Group	N	Mean	SD	Source	Sum of Squares	df	Mean Squares	F Value (Sig.)
Low	9	57.777	5.953	Between Group	5225.202	2	2612.601	20.48*
Moderate	117	72.769	11.869	Within Group	18750.158	147	127.552	
High	24	84.583	9.609	Total	23975.360	149		

*Significant at 0.05 level

The table-3 shows Scholastic Achievement of secondary school students with respect to different levels of attitude towards computer education. The obtained ‘F’ value 20.48 is higher than the table value of 3.06 for df ‘2 and 147’ requested for significance at 0.05 level of significance. The results of the study indicated that “there exists significant difference in the Scholastic Achievement of secondary school students having different (low, moderate and high) attitude levels towards computer education.” To determine the significant difference in the Scholastic Achievement of students having different levels of attitude towards computer education these paired mean scores, the ‘Scheffe’s post hoc test was applied and the results are presented in Table-3(a).

Table-3(a): Scheffe’s Post Hoc Analysis on Scholastic Achievement scores of students having different levels of attitude towards computer education.

Different levels of attitude towards Computer Education			Mean Difference
Low	Moderate	High	
57.777	72.769	-	14.992*
-	72.769	84.583	11.814*
57.777	-	84.583	26.806*

*Significant at 0.05 level.

Table-3(a) shows significant paired mean difference in the Scholastic Achievement of secondary school students having low and moderate; moderate and high & low and high attitude levels towards computer education and the mean differences are 14.992; 11.814 and 26.806 respectively which was greater than the critical difference value. It concludes that “there exists significant difference in the Scholastic Achievement of students having low and moderate; moderate and high & low and high attitude levels towards computer education. The students having higher level attitude towards computer education had higher achievement when compared with students having moderate and low attitudes.

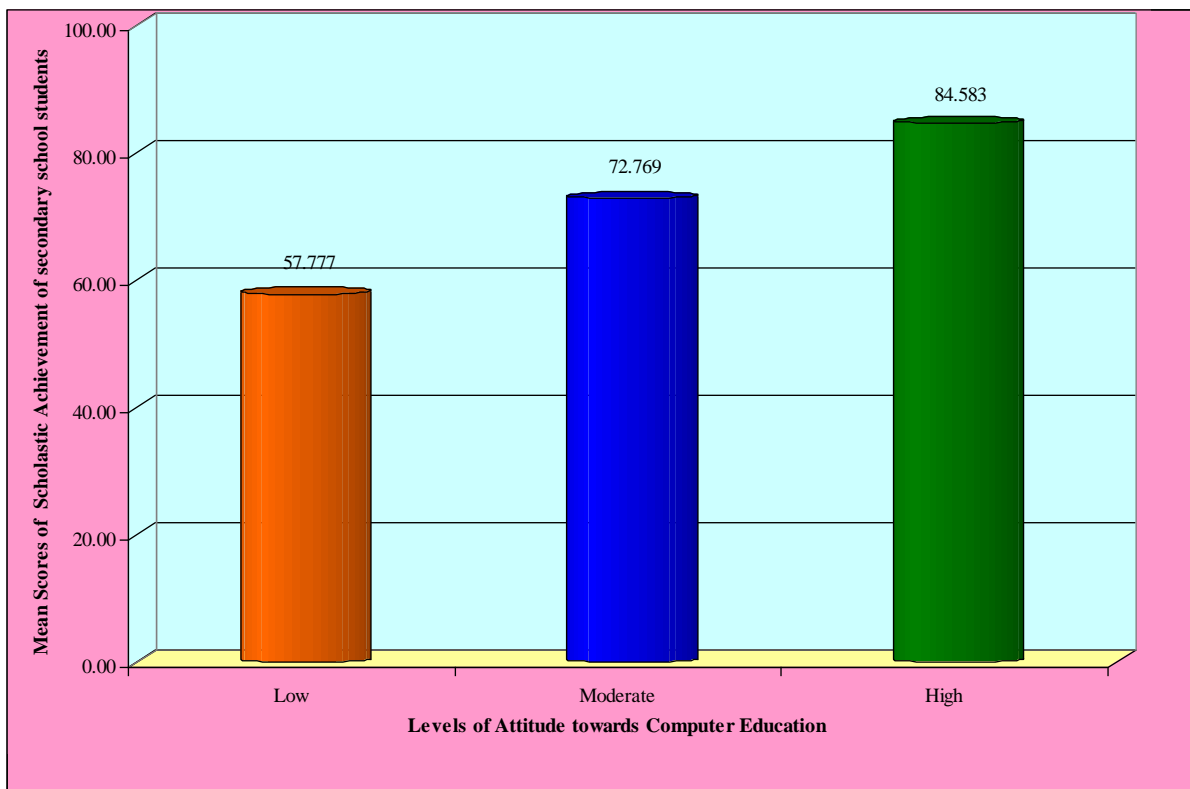


Fig.2: Bar graph shows comparison of Scholastic Achievement of students having different levels of attitude towards computer education.

RESULTS

1. There was a significant positive relationship between Scholastic Achievement of secondary school students and their attitude towards computer education.
2. There was a significant difference in the Scholastic Achievement of secondary school boys and girls.
3. There was a significant difference in the Scholastic Achievement of secondary school students having low, moderate and high levels of attitude towards computer education.

CONCLUSION

From the present study, the 'r' analysis result shows that there was a significant positive relationship between Scholastic Achievement of secondary school students and their attitude towards computer education. The attitude of students towards computer education can have a significant impact on their academic achievement. A positive attitude towards computer education can lead to increased motivation, engagement, and academic success. The 'F' test analysis results shows that there exists significant difference in the Scholastic Achievement of secondary school students having low, moderate and high attitude levels of towards computer education. This is confirmed that students who had higher level of attitude towards computer education had higher scholastic achievement than students who had moderate and low levels of attitudes. Schools Creates a positive and supportive learning environment that encourages students to take risks and make mistakes in their computer education without fear of criticism and encourage students to further explore computer education outside of the classroom. This can include participating in coding competitions, attending technology conferences, or working on personal projects. The 't' test results shows that there was a significant difference in the Scholastic Achievement of secondary school boys and girls. It concludes that secondary school boys had better achievement in scholastic than girls. It is essential to explain to girls the relevance of computer education to their future careers and everyday life. This can help them understand why it is important to learn computer skills and how it can benefit them and also highlight the success stories of individuals who have achieved success through computer education. This can help students see the benefits of computer education and inspire them to work hard to achieve their own goals.

REFERENCES

1. Abdullah, Zhwan Dalshad; Ziden, Azidah Bit Abu; Aman, Rahimi Binti Chi and Aman, Rahimi Binti Chi (2015), Students' Attitudes towards Information Technology and the Relationship with their Academic Achievement, *Contemporary Educational Technology*, 6(4), 338-354.
2. Ariffin, Tengku Faekah Tengku; Nordin, Hasniza; and Karim, Abdul Malek Abdul. "What Predicts Attitudes Toward Computer?"
3. Duffy, Thomas M. et al. (1992), *Constructivism and Technology of Instruction*, London: Lawrence Erlbaum Associates.
4. Lokesh Koul. "Methodology of Educational Research", Third revised Edition, Vikas Publishing Housing Pvt. Ltd.

5. Maddux, Cleborne, et. al. (1997), Educational Computing Learning with Tomorrow's Technologies, United States of America: Viacom Company.
6. Mustapha Osman Opoku and Kuranchie A. (2014), Understanding Student Attitude Towards Computer Education: A Survey of SHS in the Sunyani Municipality, *Academic Journal of Interdisciplinary Studies*
7. Roblyer, M.D., et. al. (2000), *Integrating Educational Technology into Teaching*, United States of America: Prentice Hall, Inc.
8. Salih USUN, (2004), Undergraduate Students Attitudes on the use of Computers in Education, *The Turkish Online Journal of Educational Technology*, 3(2), Article 10.
9. Sridevi P. (2017), Attitude of Students towards Computer in Perambalur District, Tamilnadu, *IRJMST*, 8(6).
10. Tripathi, Pooja and Maity, Nabanita (2019), Attitude of Student's toward Learning Computer in Secondary School, *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, 24(1), 24-28.
11. Vidhyageetha, N. and Padma, B. "Higher Secondary Students' Achievement in Computer Science and their Attitude towards Computer." International Journal of Teacher Educational Research (IJTER) (October, 2012), Vol.1(2) : 16-24.