ANALYSIS OF HIGH SCHOOL STUDENTS' ATTITUDE TOWARDS COMPUTER EDUCATION IN RELATION TO SEX, TYPE OF MANAGEMENT AND MEDIUM OF INSTRUCTION

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ABSTRACT

This descriptive survey investigates the attitudes of high school students towards computer education in relation to sex, type of management, and medium of instruction. Using simple random sampling, 150 students from various management types in Bengaluru District, Karnataka, were surveyed. A self-constructed Attitude towards Computer Education Scale and personal proforma were employed for data collection. Statistical analysis, including mean, standard deviation, and independent t-test, revealed significant differences in attitudes. Boys exhibited more positive attitudes than girls, and private unaided school students displayed the highest mean scores. Additionally, students in English medium schools showed a more favorable attitude than those in Kannada medium schools. These findings underscore the diversity in attitudes towards computer education among high school students, emphasizing the need for tailored educational strategies.

Keywords: High School, Students, Attitude, Computer Education,

1. INTRODUCTION:

The integration of computers as effective instructional tools holds immense potential in the educational landscape, particularly in developing nations like India. In the context of secondary schools, the utilization of computers has ushered in positive impacts and transformative developments in the learning process. Computer technology stands as a key enabler for delivering quality education, influencing various facets of the curriculum. Its introduction has brought a modern touch to the education system, with students now finding it more convenient to seek information online than from traditional reference books. The prevailing attitude of students towards computer education has become a subject of interest for researchers, leading to investigations on factors such as knowledge, access, and gender-based differences.

Several studies have shed light on the multifaceted nature of students' attitudes towards computer education. While a majority of students exhibit knowledge and access to computers, the universality of computer access at home remains a challenge. Interestingly, female students demonstrate a more positive attitude towards computer education compared to their male counterparts. This disparity underscores the need for a comprehensive understanding of the factors influencing students' perceptions of computer education.

1.1   Impact of Technology on Attitudes:

The incorporation of technology, including computers, has shown promise in enhancing students' attitudes towards learning by maximizing their experiences of success. Notably, computer-based education has been associated with improved academic achievement, and the evolving trends in individualized instruction further contribute to the positive attitudes observed. As technology continues to shape the educational landscape, understanding the evolving role of computers in the learning and teaching process is crucial.

1.2   Computers in Daily Life:

Beyond the educational sphere, computers have permeated various aspects of daily life, emerging as powerful problem-solving tools. Given the ubiquity of computer involvement in our routines, it is evident that computers have become indispensable tools designed to address a myriad of challenges.

Several factors influence students' attitudes towards computer education. These include the educational level of their fathers, access to computers at home, computer education experiences, and overall academic performance. It is crucial to recognize that the design of computer-based education programs also plays a pivotal role in shaping students' attitudes. Therefore, the thoughtful development of such programs becomes imperative to foster positive perceptions of computer education.

1.3   Importance of Attitude Towards Education:

Student attitudes towards education stand as crucial predictors of academic success and overall well-being. A comprehensive study on situational variables influencing these attitudes can provide valuable insights into their formation and potential avenues for influence. The findings of such a study could hold significant implications for educators, parents, and policymakers, offering insights into how attitudes towards education can be positively shaped and supported.

1.4   Review of Relevant Studies:

A review of pertinent studies further illuminates the landscape of students' attitudes towards computer education. Bhatia's study (2022) in Ujjain district highlighted no significant gender-based or rural-urban differences in students' attitudes towards computers. Pandey and Pranay (2016) found no significant variations in computer attitudes concerning gender, location, or discipline among XI standard students in West Bengal. Salako et al. (2016) explored students' perceptions of computer education, revealing a majority with positive perceptions and no significant gender-based differences. Abdullah et al. (2015) found a correlation between students' academic achievement and attitudes towards Information Technology, with a difference noted between Arts and Science students. Opoku and Kuranchie (2014) uncovered a positive attitude among female students towards computer education in the Sunyani Municipality. Therefore, the attitude towards education, especially computer education, plays a pivotal role in students' academic success and overall well-being. A deeper understanding of the factors influencing these attitudes is crucial for educators, parents, and policymakers. The findings from such studies could inform the development of programs and policies aimed at cultivating positive attitudes towards education among students. In this ever-evolving technological landscape, acknowledging and addressing the multifaceted aspects of computer education attitudes are imperative for fostering a positive learning environment.

2.   SIGNIFICANCE OF THE STUDY

The significance of this study lies in its exploration of the attitudes of secondary school students towards computer education in the context of a developing nation like India. In an era where computers have become integral to modern education, understanding students' perceptions is paramount for educators, policymakers, and parents. The findings have the potential to inform educational strategies, curriculum development, and the design of computer-based programs to better align with students' needs and preferences. Furthermore, insights into factors influencing attitudes, such as gender, access, and academic performance, can contribute to fostering a positive learning environment. As computer technology continues to evolve, this study provides valuable implications for enhancing the effectiveness of computer education, bridging the digital divide, and ultimately promoting the holistic development of students in the educational landscape of developing nations.

3.   STATEMENT OF THE PROBLEM

The research problem identified for the current investigation is: "Analysis of High School Students' Attitude towards Computer Education in relation to sex, type of management and medium of instruction."

4.   OBJECTIVES OF THE STUDY

The following are the objectives for the study

1. To find out the differences in the high school students' Attitude towards Computer Education with regard to sex.

2. To find out the differences in the high school students' Attitude towards Computer Education with regard to type of management.

3. To find out the differences in the high school students' Attitude towards Computer Education with regard to medium of instruction.

5.   RESEARCH HYPOTHESES

Following are the research hypotheses for the present research:

1. There is no significant difference in the high school boys and girls' Attitude towards Computer Education.

2. There is no significant difference in the government and private aided school students' Attitude towards Computer Education.

3. There is no significant difference in the private aided and private unaided school students' Attitude towards Computer Education.

4. There is no significant difference in the government and private unaided school students' Attitude towards Computer Education.

5. There is no significant difference in the English and Kannada medium students' Attitude towards Computer Education.

6.   METHOD USED

The present study is descriptive in nature. To meet the objectives of the present study descriptive survey method of investigation was employed. In the study, the investigator used simple random sampling technique for selecting the sample. The sample consisted of 150 high school students studying in different type of management of Bengaluru District, Karnataka. For the data collection purpose self constructed scale of Attitude towards Computer Education Scale along with students personal proforma was used. The collected data was analyzed by statistics like, mean, standard deviation and independent t-test was used by the investigator to arrive at the results. The level of significance was fixed at 0.05 confidence level in all the cases.

7.   ANALYSIS AND INTERPRETATION OF DATA

Table-1: Independent 't' test results related to Attitude towards Computer Education scores of high school students with respect to sex.

Sex	Sample	Mean	Std. Deviation	't' Value	Sig. level
Boys	75	65.706	17.110	4.10	*
Girls	75	55.293	13.796		

* Significant at 0.05 level (N=150; df=148, 0.05=1.98)

Table 1 revealed that, sample, mean, standard deviation, 't' value and significance level related to high school students' Attitude towards Computer Education due to variations in the sex. The independent 't' value of high school boys and girls' Attitude towards Computer Education is found to be 4.10 (df=148) which is significant at 0.05 (1.98) level of significance. It implies 'there is a significant difference in the high school boys and girls' Attitude towards Computer Education.' However, the Attitude towards Computer Education

mean scores of high school boys (M=65.706) is higher than the mean scores of girls (M=55.293). It is concluded that high school boys' attitude towards computer education is favourable when compared with girls.
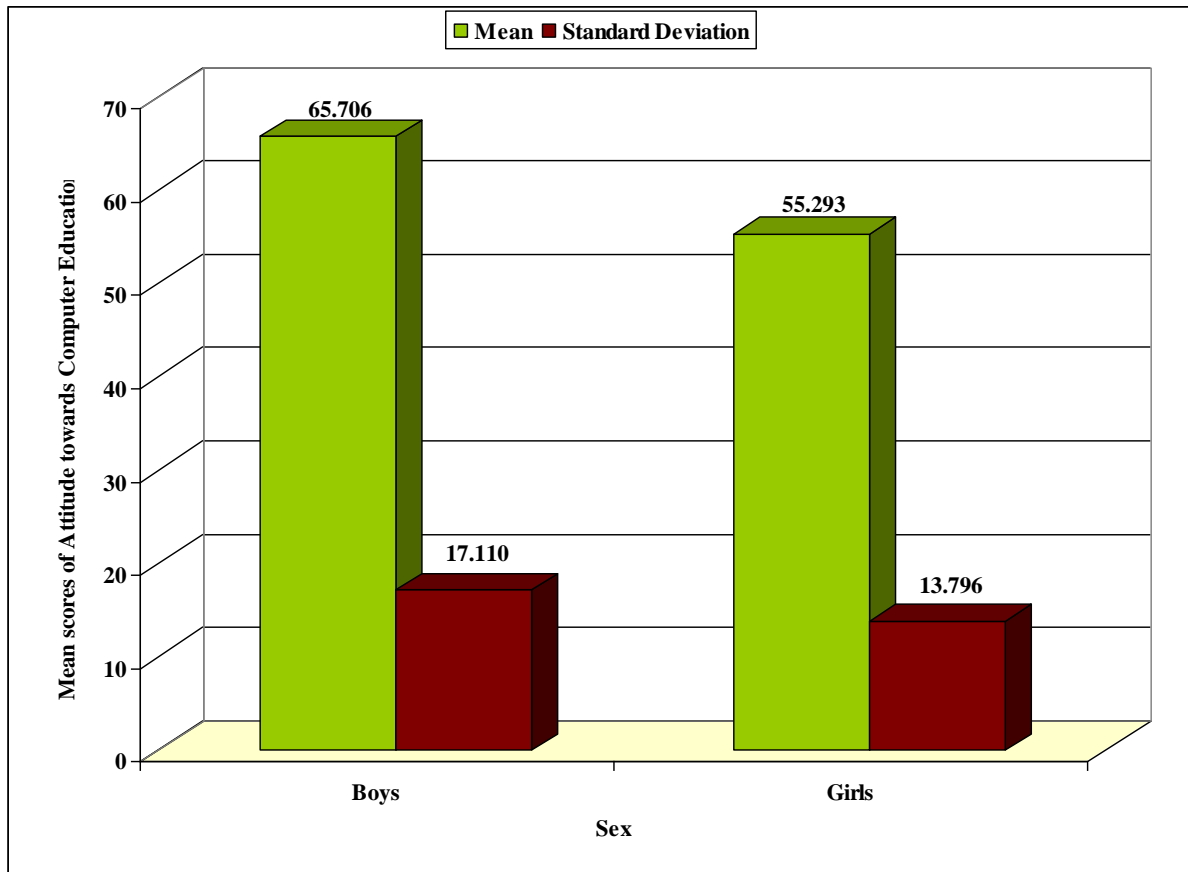

Fig.1: Comparison of Attitude towards Computer Education mean scores of high school students with regard to sex.

Table-2: Independent 't' test results related to Attitude towards Computer Education scores of high school students with respect to type of management.

Type of Management	Sample	Mean	Std. Deviation	't' Value	Sig. level
Government	50	52.100	11.556	2.86	*
Private Aided	50	59.380	13.761		
Private Aided	50	59.380	13.761	3.32	*
Private Unaided	50	70.020	17.997		
Government	50	52.100	11.556	5.92	*
Private Unaided	50	70.020	17.997		

[*] Significant at 0.05 level (N=100; df=98, 0.05=1.98)

Table 2 shows that, sample, mean, standard deviation, 't' value and significance level related to high school students' Attitude towards Computer Education due to variations in the type of management.

The independent 't' value of government and private aided high school students' Attitude towards Computer Education is found to be 2.86 (df=98) which is significant at 0.05 (1.98) level of significance. It implies 'there is a significant difference in the government and private aided high school students' Attitude

towards Computer Education.' However, the Attitude towards Computer Education mean scores of private aided school students (M=59.380) is higher than the mean scores of government school students (M=52.100).

Also the independent 't' value of private aided and private unaided high school students' Attitude towards Computer Education is found to be 3.32 (df=98) which is significant at 0.05 (1.98) level of significance. It implies 'there is a significant difference in the private aided and private unaided high school students' Attitude towards Computer Education.' However, the Attitude towards Computer Education mean scores of private unaided school students (M=70.020) is higher than the mean scores of private aided school students (M=59.380).

Further also the independent 't' value of government and private unaided high school students' Attitude towards Computer Education is found to be 5.92 (df=98) which is significant at 0.05 (1.98) level of significance. It implies 'there is a significant difference in the government and private unaided high school students' Attitude towards Computer Education.' However, the Attitude towards Computer Education mean scores of private unaided school students (M=70.020) is higher than the mean scores of government school students (M=52.100).
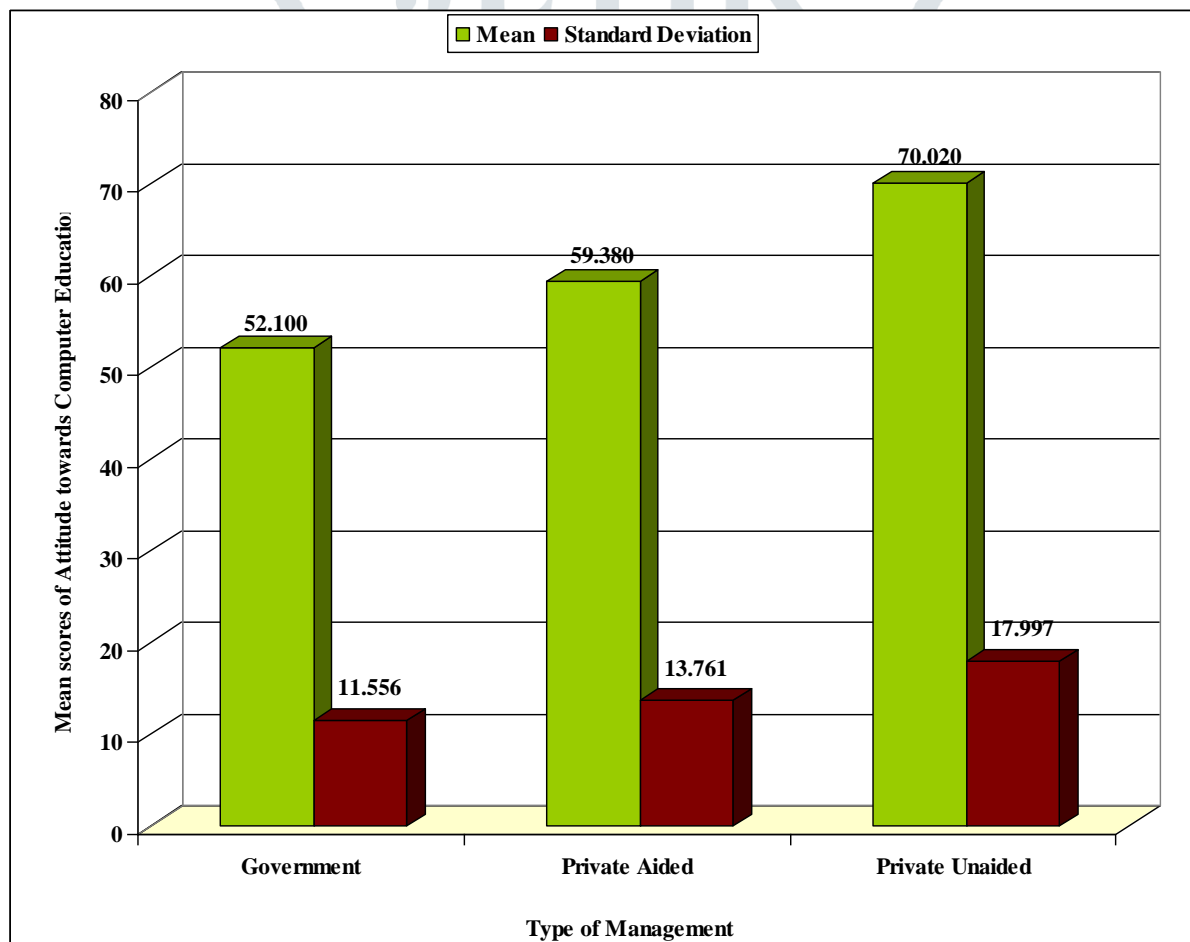

Fig.2: Comparison of Attitude towards Computer Education mean scores of high school students with regard to type of management.

Table-3: Independent 't' test results related to Attitude towards Computer Education scores of high school students with respect to medium of instruction.

Medium of Instruction	Sample	Mean	Std. Deviation	't' Value	Sig. level
English	75	63.466	16.645	2.25	*
Kannada	75	57.533	15.593		

* Significant at 0.05 level (N=150; df=148, 0.05=1.98)

The above table 3 shows that, sample, mean, standard deviation, 't' value and significance level related to high school students' Attitude towards Computer Education due to variations in the medium of instruction. The independent 't' value of English and Kannada medium high school students' Attitude towards Computer Education is found to be 2.25 (df=148) which is significant at 0.05 (1.98) level of significance. It implies 'there is a significant difference in the English and Kannada medium high school students' Attitude towards Computer Education.' However, the Attitude towards Computer Education mean scores of English medium students (M=63.466) is higher than the mean scores of Kannada medium students (M=57.533). It is concluded that English medium high school students' attitude towards computer education is favourable when compared with Kannada medium students.
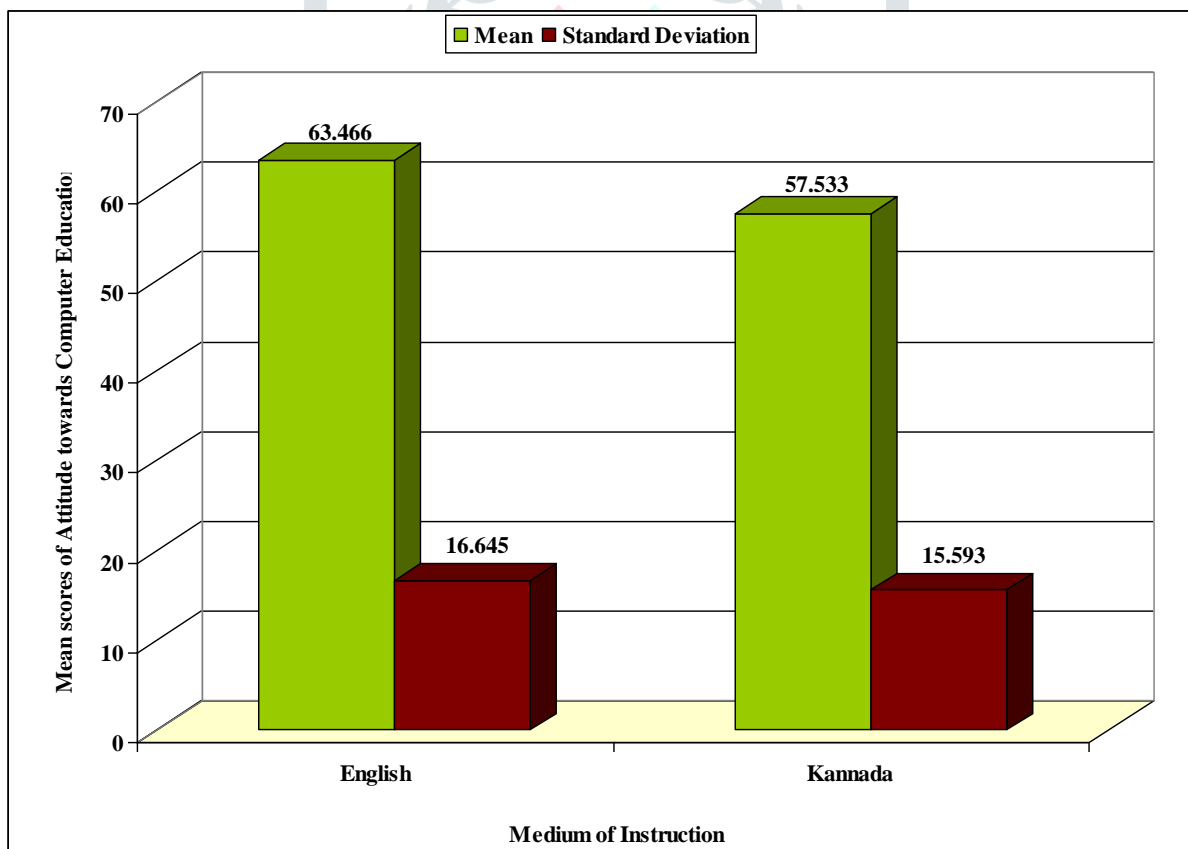

Fig.3: Comparison of Attitude towards Computer Education mean scores of high school students with regard to medium of instruction.

8. RESULTS

1. There was a significant difference in the high school boys and girls' Attitude towards Computer Education ('t'=4.10 at 0.05 level). The Attitude towards Computer Education mean scores of high school boys (M=65.706) is higher than the mean scores of girls (M=55.293).

2. There was a significant difference in the government and private aided high school students' Attitude towards Computer Education ('t'=2.86 at 0.05 level). The Attitude towards Computer Education mean scores of private aided school students (M=59.380) is higher than the mean scores of government school students (M=52.100).

3. There was a significant difference in the private aided and private unaided high school students' Attitude towards Computer Education ('t'=3.32 at 0.05 level). The Attitude towards Computer Education mean scores of private unaided school students (M=70.020) is higher than the mean scores of private aided school students (M=59.380).

4. There was a significant difference in the government and private unaided high school students' Attitude towards Computer Education ('t'=5.92 at 0.05 level). The Attitude towards Computer Education mean scores of private unaided school students (M=70.020) is higher than the mean scores of government school students (M=52.100).

5. There was a significant difference in the English and Kannada medium high school students' Attitude towards Computer Education ('t' = 2.25 at 0.05 level). The Attitude towards Computer Education mean scores of English medium students (M=63.466) is higher than the mean scores of Kannada medium students (M=57.533).

9. CONCLUSION AND EDUCATIONAL IMPLICATIONS

In conclusion, the study reveals significant differences in the attitudes towards computer education among various subgroups of high school students. Boys exhibit a more positive attitude compared to girls, and private unaided school students show the highest mean scores, surpassing both government and private aided school students. Moreover, students in English medium schools display a more favorable attitude than their counterparts in Kannada medium schools. These findings highlight the diversity in attitudes towards computer education across gender, school types, and mediums of instruction.

These findings hold important implications for educational stakeholders. Recognizing and addressing the variations in attitudes among different student groups is crucial for tailoring computer education programs to meet diverse needs. Educators can use these insights to design interventions that foster a positive attitude towards computer education, particularly among groups that may exhibit lower mean scores. Policymakers should consider these variations when formulating educational policies to ensure equitable access and a positive learning environment for all students, regardless of gender, school type, or medium of instruction. Ultimately, this study provides valuable guidance for optimizing computer education strategies in high schools.

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