

# A STUDY ON USE OF COMPUTER AMONG HIGHER SECONDARY STUDENTS IN RELATION TO THEIR COMPUTER ATTITUDE AND ACHIEVEMENT IN COMPUTER SCIENCE

Research  
Paper

## ABSTRACT

*The present attempt is to study the use of computer and its possible relationship to computer attitude and achievement in Computer Science among higher secondary students. The investigators have randomly selected 802 higher secondary students as sample. A scale to measure use of computer among higher secondary students (2008) and higher secondary student's computer attitude scale constructed and validated by the investigator (2008) was used in this study. The result reveals that there is no significant relationship between use of computer and achievement in Computer Science and computer attitude of higher secondary students. This study reveals that the use of computer, computer attitude and achievement in Computer Science of higher secondary students need to be improved.*

## INTRODUCTION

The main function of secondary education is to prepare the young to live effectively and properly as adults in the society. Education will also help to develop intellectual powers in the young and transmit the knowledge and wisdom of the society to the new generation. Nowadays the world is changing rapidly with technological advancement. Information Technology is a fast developing science. So the students must know the application of that Science in daily life. The tremendous influence and growth of computer technology creates pressure on everyone affected by its proliferation to interact with computers and become proficient in their use. The computer is causing a change in society that is comparable to the change occasioned by the industrial revolution. This awareness depends upon the use of computer among the higher secondary students. The use of computer among the higher secondary students is connected to computer attitude and achievement in computer science. The present study on the levels of use of computer, computer attitude and achievement in Computer Science will contribute to some extent to our knowledge of how beneficial the use of computers is for higher secondary students. In this era of technological advancement, computer education is considered to be an essential ingredient of education. But use of computer, computer attitude and achievement in Computer Science, of a student is an important factor in determining his progress in the field of computer education. The students belonging to the higher secondary level may

have a chance of acquiring good knowledge in computer. Computer attitude and achievement in Computer Science of students are inevitably affected by their easy access to the technology. The computer knowledge possessed by the students will be very useful to them for their future development and if they have a high level of computer attitude and achievement in Computer Science they may develop an inclination towards the use of computer knowledge for their academic growth. It is also believed that if they possess a high level of computer attitude and achievement in Computer Science then there may be a chance for them to make use of computers easily. The aim of the study was to investigate the use of computer among higher secondary students as related with their computer attitude and achievement in Computer Science.

## OBJECTIVES

The investigator has framed the following objectives for the present investigation.

- 1) To find out use of computer and its possible relationship to achievement in Computer Science and computer attitude.

**Jomy Johnson**

*Research Scholar*

**Dr. V. Vinaitheerthan**

*Professor (Retd) DTERT & Director*

*School of Teacher Education and Research*

*SRM University.*

- 2) To study the significance of the difference between the sub-samples of the students in respect of their use of computer, computer attitude and achievement in Computer Science.

**HYPOTHESES**

- 1) There is significant relationship between use of computer and achievement in computer science and computer attitude of higher secondary students.
- 2) There is significant difference in the use of computer between higher secondary students i) male and female ii) urban and rural iii) science and arts iv) parents with and without knowledge about computer v) availability and non availability of personal computer at home.
- 3) There is significant difference in the Achievement in computer science between higher secondary students i) male and female ii) urban and rural iii) science and arts iv) parents with and without knowledge about computer v) availability and non availability of personal computer at home.
- 4) There is significant difference in the computer attitude between higher secondary students i) male and female ii) urban and rural iii) science and arts iv) parents with and without knowledge about computer v) availability and non availability of personal computer at home.

**PROCEDURE**

**Tools**

Tools used were: a scale to measure the use of computer among higher secondary students constructed and validated by the investigator (2008) and computer attitude scale constructed and validated by kumaran and selvaraj (2001). Achievement in Computer Science was measured from the achievement scores in the subject.

**Sample**

Cluster sampling technique was used in the selection of the sample of as many as 802 students studying in Higher Secondary Schools situated in Thrissur district of Kerala, India.

**Statistical Treatment of the Data**

Mean and standard deviation, t' test, ANOVA,

Pearson product moment correlation were used for data analysis.

**Table 1**  
**COEFFICIENT OF CORRELATION**  
**BETWEEN THE VARIABLES**

Variables	Correlation coefficient Entire sample (802)
Use of computer with computer attitude	0.02
Use of computer and achievement in Computer Science	0.06

**Table 2**  
**DIFFERENCE BETWEEN MEAN SCORES**  
**OF USE OF COMPUTER BASED ON**  
**RELEVANT SUB-SAMPLES**

Variable	Category	Mean	S.D	N	Calculated 't' value	Significance at 5% level
a. Gender	Male	71.09	13.75	401	5.44	S
	Female	65.85	13.56	401		
b. Location	Urban	68.15	14.76	390	0.63	NS
	Rural	68.77	13.03	412		
c. Stream of subject	Science	66.73	15.32	400	3.54	S
	Art	70.19	12.09	402		
d. Parents' knowledge about computer	Yes	73.79	12.66	212	6.65	S
	No	66.57	13.83	590		
e. Availability of personal computer at home	Yes	74.76	13.48	146	6.16	S
	No	67.08	13.61	656		

Table value of 't' at 5% level of significance is 1.96

**Table 3**  
**DIFFERENCE BETWEEN MEAN SCORES**  
**OF COMPUTER ATTITUDE BASED ON**  
**RELEVANT SUB-SAMPLES**

Variable	Category	Mean	S.D	N	Calculated 't' value	Significance at 5% level
a. Gender	Male	78.96	9.37	400	2.5	S
	Female	77.27	9.72	400		
b. Location	Urban	78.85	9.48	389	2.11	S
	Rural	77.42	9.64	411		
c. Stream of subject	Science	78.88	9.89	399	2.25	S
	Art	77.36	9.21	401		
d. Parents knowledge about computer	Yes	80.71	8.67	211	4.64	S
	No	77.19	9.73	589		
e. availability of Personal computer at home	Yes	80.3	8.35	145	3.05	S
	No	77.63	9.77	655		

(Table value of 't' at 5% level of significance is 1.96)

Table 4

**DIFFERENCE BETWEEN MEAN SCORES OF ACHIEVEMENT IN COMPUTER SCIENCE BASED ON RELEVANT SUB-SAMPLES**

Variable	Category	Mean	S.D	N	Calculated 't' value	Significance at 5% level
a. Gender	Male	33.45	8.10	401	0.19	NS
	Female	33.56	8.17	401		
b. Location	Urban	33.59	8.18	390	0.28	NS
	Rural	33.43	8.10	412		
c. Stream of subject	Science	33.74	8.20	400	0.82	NS
	Art	33.27	8.06	402		
d. Parents knowledge about computer	Yes	33.79	8.11	212	0.6	NS
	No	33.40	8.14	590		
e. Availability of personal computer at home	Yes	33.30	8.08	146	0.34	NS
	No	33.55	8.15	656		

(Table value of 't' at 5% level of significance is 1.96)

**FINDINGS**

- There is no significant relationship between use of computer and achievement in Computer Science and computer attitude of higher secondary students.
- There is significant difference in the use of computer between male and female higher secondary students. Compared to female students, male higher secondary students rank higher in the use of computer.
- There is significant difference in the use of computer between higher secondary students those studying Science and Arts subjects. Compared to students of science, arts higher secondary students rank higher in the use of computer.
- There is significant difference in the use of computer between higher secondary students whose parents have knowledge about computer and those whose parents lack knowledge about computer. Compared to students whose parents lack knowledge about computer, students whose parents have knowledge about computer rank higher in the use of computer.
- There is significant difference in the use of computer between higher secondary students who have a personal computer at home and those not having a personal computer at home. Compared to students

not having a personal computer at home, those having a computer at home rank higher in the use of computer.

- There is no significant difference in the use of computer between higher secondary students studying in urban schools and those studying in rural schools.
- There is significant difference between higher secondary male and female students with respect to their computer attitude. Compared to female students, male students have a better computer attitude.
- There is significant difference between higher secondary urban and rural students with respect to their computer attitude. Compared to rural students, urban students have a better computer attitude.
- There is significant difference between higher secondary science and arts students with respect to their computer attitude. Compared to art students, science students have a better computer attitude.
- There is significant difference between higher secondary students whose parents have knowledge about computer and those whose parents lack knowledge about computer with respect to their computer attitude. Compared to students whose parents lack knowledge about computer, students whose parents have knowledge about computer have a better computer attitude.
- There is significant difference between higher secondary students who have a personal computer at home and those not having computer at home with respect to their computer attitude. Compared to students not having a personal computer at home, those having a computer at home have a better computer attitude.
- There is no significant difference in the achievement in Computer Science between male and female higher secondary students, higher secondary students studying in urban schools and rural schools, higher secondary students studying science and arts subject, higher secondary students whose parents have knowledge about computer and those whose

parents lack knowledge about computer and higher secondary students having a personal computer at home and those not having a personal computer at home.

## CONCLUSION

The study served as an eye opener regarding the use of computer, computer attitude and achievement in Computer Science of higher secondary students. Even though there are some limitations in the present study, it is evident that the use of computer, computer attitude and achievement in computer science is average in higher secondary students. The result reveals that there is no significant relationship between use of computer and achievement in Computer Science and computer attitude of higher secondary students. A significant difference is observed in the use of computer between groups of students divided by gender, stream of subject, parents' knowledge about computer and availability of personal computer at home. A significant difference is observed also in computer attitude between groups of students divided by gender, stream of subject, location of the school, parents' knowledge about computer and availability of personal computer at home. This reveals that the use of computer, computer attitude and achievement in computer science of higher secondary students needs to be improved.

## REFERENCE

1. Kumaran, D and Selvaraj, K (2001) A study of cognitive and affective computer attitude of teachers. *Journal of All India Association for Educational Research*. 13, 1& 2, 1-7, March - June.
2. Rajasekar, S. (2005) University students' attitude towards computer. *Recent Researches in Education and Psychology* 10, 1-11.
3. Sam, H.K, Othman, A.E.A, and Nordin, Z.S (2005) Computer self-efficacy, computer anxiety and attitudes toward the internet: A study among undergraduates in Unimas. *Educational Technology and Society* 8, 4, 205-219.
4. Brosnan, M and Lee, W. (1998) A cross-cultural comparison of gender differences in computer

attitudes and anxiety: The UK and Hong Kong. *Computers in Human Behavior*, 14 (4), 559-577.

Research  
Paper

5. Chua, S. L Chen, D and Wong, A. F. L (1999) *Computer anxiety and its correlates: A meta-analysis. Computers in Human Behavior* 15, 609-623.

\*\*\*

Continuation of page 7

## DEVELOPMENT AND...

## REFERENCE

1. Bhagwati, J. (1992) *Regionalism versus multilateralism, The World Economy*, 15 (5): 535-556.
2. Brass, P., *Regions, regionalism and research on modern Indian society and politics in Regions and Regionalism in South Asian Studies: An Exploratory Study*, ed. R.I. Crane, 1966, pp. 258-70. *Papers presented at a Symposium held at Duke University*.
3. Brass, P., *Pluralism, regionalism and decentralising tendencies in contemporary Indian politics in The States of South Asia: Problems of National Integration*, eds. A. J. Wilson and D. Dalton, pp. 223-164. (London, Hurst and Company, 1982).
4. Crane, pp. 48-88. *Papers presented at a symposium held at Duke University (1966)*.
5. De Rosa, D. A., (2007) *Regional Integration Arrangements: Static Economic Theory*.
6. Datta, P., *Regionalisation of Indian Politics*. (Delhi, Sterling Publishers Ltd., 1994).

Owned & Published by Rev. Dr. S. Sebastian, S.J. from St. Xavier's College of Education, Palayamkottai, Tirunelveli -2. Printed by G. Kanagasabapathi at Muthulethchumi Press, 123-G, Trivandrum Road, Palayamkottai - 627 002.  
Editor : Rev. Dr. S. Sebastian, S.J.