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ATTITUDE OF SENIOR SECONDARY SCHOOL STUDENTS TOWARDS COMPUTER

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ABSTRACT

The world of today is largely the product of development that has taken place in the field of science with an advanced technology of computer. Computer education is understood in the broadest sense i.e. the preparation of whole society for the computer age. To cope with the present and future demand, there is need for introducing computer education in all stages of education including schools and university education. Therefore, keeping in view the importance of computers in day-to-day life of the students, the present study was undertaken to investigate the attitude of senior secondary school students towards computer with reference to certain demographic variables. For this purpose, a sample of 200 senior secondary school students belonging to science and arts streams was chosen from District Shimla of Himachal Pradesh. Gender wise and locality wise distribution of student was also done. The data so collected was analyzed and interpreted on the basis of mean, S.D. and t-test. The findings of the study revealed a significant difference in the attitude of senior secondary school students towards computer in relation to gender. However, no significant difference in the attitude of senior secondary school students towards computer was reported with respect to stream and locality.

INTRODUCTION

The world of today is largely the product of development that has taken place in the field of science with an advanced technology of computer. The word **"**computer**"** comes from the word **"**compute**",** which means **"**to calculate**".** Computer education is understood in the broadest sense i.e. the preparation of whole society for the computer age. Computers are used

in schools in two ways, first as a tool to teach other subjects, and second to teach computer education as a subject. In the first use, the computer is used to teach subjects like physics, chemistry, biology etc. through computer assisted instructions (CAI). The second and important use of computer is to teach computer education as a subject.

Computers and all these techniques associated with their use should not be considered as a panacea for all human problems. It would be even more serious to commit error of attempting to reduce all issues to parameters which can be treated by computer. The trend towards specialization is natural, but quite dangerous. It produces people who are intellectually similar to certain artificially bred plants or animals that are unable to do what their master consider practical. A computer is used in research institutions or Universities for analyzing the data for obtaining the results and verifying the research hypotheses. Teaching and testing are the two major tasks of educational process. The computer assisted educational process. The computer assisted instructions are used for both the purpose. The computers are helpful in banking, scoring of tests, item analysis and printing of results.

Computers are used in guidance and counseling services. The students are diagnosed for educational guidance. Their weaknesses are identified and remedial instructions are provided for them by a computer. Computers store complete cumulative records and results of psychological tests can be stored in computers. Computer Assisted Instructions can be used for teaching and instruction purposes in the field of education. Briefly, it can be said that use of computers in education is now spread over the whole educational spectrum. It has become increasingly important with decreasing cost of hardware and software.

Meaning And Concept Of Attitude Towards Computer

The concept of attitude arises from attempts to account for observed regularities in the behaviour of individual persons. The quality of one's attitudes is judged from the observable, evaluative responses that are made. While one might consult one's inner experiences as evidence of one's own attitudes, only public behaviour can receive objective study. Attitudes are sometimes regarded as underlying predispositions, while opinions are seen as their overt manifestations. A rarer distinction equates attitudes with unconscious and irrational tendencies but equates opinions with conscious and rational activities. Others view attitudes as meaningful and central but consider opinions as more peripheral and inconsequential. Attitude is one of the determining factors in predicting people's behavior. Attitude has been defined as "a learned predisposition to respond positively or negatively to a specific object, situation, institution or person" Therefore, attitude affects people in everything they do and in

fact, reflects what they are and hence a determining factor of people's behavior (Yushau 2006). Computer attitude has been defined as a person's general evaluation or feeling of favor or antipathy towards computer technologies and specific computer related activities (Smith, Caputi and Rawstorne 2000).

Computer technology has revolutionized the Indian society. Computer education is understood in the broadest sense i.e. the preparation of whole society for the computer age. Today's age is quite different from that of past. It is characterized by the rapid change in technology, life style and values which are at time difficult to comprehend.

Objectives of Computer Education at Senior Secondary Stage

1. To develop vocational skills in computers for further life.
2. To develop creativity in the area of computers.
3. To develop a stronger foundation for further studies in computers.

Computer education should be introduced at secondary and higher secondary stage at the outset to follow by computer literacy programs at the middle and primary school stage. Computer education would be the part of curriculum of every student, irrespective of eventual branching into science, humanities or Arts, as a tool with application in all the subjects and all aspects of human behaviour.

Significance of the study

Computer education is understood in the broadest sense i.e. the preparation of whole society for the computer age. This preparation should take into account differences in age groups as well as differences between professional categories. In order to prepare youth who are perfectly at ease in a constantly evolving computerized society which is based on equality of opportunity, the introduction to informatics should begin in nursery school or at least at elementary school. So, it is necessary that the students should have knowledge of computer. The effect on student's attitude as a result of using computer technology to teach and learn new fields requires further study.

Various studies have been conducted on attitude towards computer use in relation to gender, but a very few studies have been conducted on attitude towards computer use with respect to locality and stream. Keeping in view the critical analysis of the findings from the review of literature, the present study was selected as under

Statement of the Problem

"*Attitude of Senior Secondary School Students Towards Computer*".

Objective

1. To study and compare the attitude of senior secondary school students towards computer with respect to their gender (male and female).
2. To study and compare the attitude of senior secondary school students towards computer with respect to their academic streams (arts and science).
3. To study and compare the attitude of senior secondary school students towards computer with respect to their locality (rural and urban).

Hypothesis:

1. The attitude of male and female senior secondary school students towards computer will not differ significantly.
2. There will be no significant difference in the attitude of arts and science senior secondary school students towards computer.
3. There will be no significant difference in the attitude of rural and urban senior secondary school students towards computer.

Delimitations:

1. The study was confined to a sample of 200 students of 12th class selected from government senior secondary schools of district Shimla of Himachal Pradesh.
2. The study was delimited to ten government senior secondary schools only.
3. The study was delimited with respect to variables such as gender(male/female), academic stream (science/ arts) and locality(rural/Urban).

Review Of Related Literature

Collis and Williams (1987) conducted a study on Canadian and Chinese adolescents' attitude towards computers and found significant gender differences in attitude towards computers.

Levin and Gordon (1989) concluded that boys have significantly more positive affective attitude towards computers than girls.

Badagliacco (1990) conducted a survey of university students and found that males have more positive attitude and more computer experience about computers.

Busch (1995) studied the gender differences in self-efficiency and attitude towards computers and found no differences in computer attitude or self-efficiency regarding simple computer task.

Bradley and Russell (1997) studied gender based differences in attitudes towards computers and results show that levels of self-related computing competence were moderately low.

Brosan and Lee (1998) conducted a cross-cultural comparison in UK and Hong Kong. In UK sample, males revealed more positive attitude towards computer than females. However in Hong Kong sample, the reverse was true.

Sharma (2004) conducted a study on the attitude of senior secondary school students towards computer education. Studies revealed that senior secondary school students possess highly favourable attitude towards computer education. The rural and urban senior secondary school students do not differ significantly in their attitude towards computer education.

Yalcinalp (2005) examined the students' attitude towards computer and belief about computers and results indicated that there is significant relation between attitude, performance and self-efficiency of students.

Taghavi (2006) examined undergraduate student's attitude towards computers**.** The study revealed that there is a small difference between student's attitude and their collegiate classification. Senior students expressed positive attitude towards computer than junior students.

Bovee (2007) conducted a research on the computer attitude of primary and secondary students in South Africa. The study showed the difference in computer students from the upper/middle class schools and students from the township schools. The latter showed more positive attitude towards computer.

Aziz and Hassan (2012) conducted a study on the factors affecting students' attitude towards computer and the research findings indicated the positive affect of sufficient

physical facilities and computer graduate teachers on students' attitude towards computer.

Kalhotra (2012) made a comparative study on the attitude of higher secondary school students of Jammu region towards computer education and the results indicated that the higher secondary school students possess high favourable attitude towards computer education, the male secondary school students belonging to rural and urban areas differ significantly in their attitude towards computer education and the male students belonging to rural areas differ significantly in their attitude towards computer education.

Methodology

In the present study, Descriptive Survey Method of research was used to collect the data.

Sample

For collecting desired data, a sample of 200 senior secondary school students was chosen for the present investigation from District Shimla of Himachal Pradesh. The district was selected on the basis of convenient sampling whereas; simple random technique was followed to select the schools. Finally the students were selected through stratified random sampling.

Tool Used

General Attitude towards Computer (GATCS) developed by Rosen and Weils (1991) was used to collect data.

Procedure Of Data Collection

Before administering the tool, investigator put the students at the ease by explaining the purpose of administration and motivated them to give their responses or opinions honestly. The respondents were also assured that the information provided by them would be kept secret and is not related to their academics. The students were asked to clear their doubts before filling up of questionnaire. Sufficient time was given to them to complete the work.

Statistical Technique Used

The 't' test was applied to study the significance of difference in mean scores with respect to gender, academic stream and locality.

Variables Of The Study

In the present study, gender (male and female), academic stream (science and arts) and locality (rural and urban) were taken as independent variables, whereas attitude towards computer was taken as dependent variable.

Analysis And Interpretation Of Data

Detailed analysis and interpretation of the data on attitude of senior secondary school students of Himachal Pradesh towards computer with respect to gender, academic stream and locality is given below:

Attitude Of Senior Secondary School Students Towards Computer

Table 1

Attitude of the Senior Secondary Students with respect to their Gender

Sr. No.	Group	N	Mean	S.D.	t-Value	Result
1.	Female	100	66.76	5.49	3.42	Significant at 0.01 level
2.	Male	100	64.19	5.14		

df= (200-2)= 198

Table value of t at 0.05 level= 1.97

Table value of t at 0.01 level= 2.60

It is evident from Table 1 that calculated 't' value for ascertaining the significant difference in mean scores of male and female senior secondary school student's attitude towards computer was found to be 3.42, which is significant at 0.01 level of confidence. It means that female and male senior secondary school students differ significantly in their attitude towards computer use. Thus, the null hypothesis no. 1 which states that **"The**

attitude of male and female senior secondary school students towards computer will not differ significantly" is rejected.

Also from the table 1, it is clear that mean scores of female and male senior secondary school students came out to be 66.76 and 64.19 respectively. This indicates that female senior secondary students possess more favourable attitude towards computer use than males.

Table 2

Attitude of the Senior Secondary Students with respect to their Academic Streams

Sr. No.	Group	N	Mean	S.D.	t-Value	Result
1.	Science	100	65.63	5.67	0.4	Not Significant
2.	Arts	100	65.32	5.29		

df= (200-2)= 198

Table value of t at 0.05 level= 1.97

Table value of t at 0.01 level= 2.60

In the table 2, it can be seen that calculated 't' value for the main effect of stream on attitude towards computer use came out to be 0.4 which is not significant at both levels of confidence. It means that science and arts senior secondary students do not differ significantly on their attitude towards computer use. So, it can be concluded that null hypothesis no. 2 which states that**" There will be no significant difference in the attitude of Arts and science senior secondary school students towards computer**" stands accepted.

Also from the table 2, it is clear that mean scores of science senior secondary students and arts senior secondary students comes out to be 65.63 and 65.32 respectively which indicates that science and arts senior secondary students have more or less similar attitude towards computer use and slight difference in value may be due to chance factor.

Table 3

Attitude of the Senior Secondary Students with respect to their Locality

Sr. No	Group	N	Mean	S.D.	t-Value	Result
1.	Rural	100	65.63	5.80	0.4	Not Significant
2.	Urban	100	65.32	5.11		

df= (200-2)= 198

Table value of t at 0.05 level= 1.97

Table value of t at 0.01 level= 2.60

It is evident from Table 3 that calculated 't' value for ascertaining the significant difference in mean scores of rural and urban senior secondary school students on computer phobia was found to be 0.4 which is not significant even at 0.05 level of confidence. It means that rural and urban senior secondary school students do not differ significantly in their attitude towards computer use. Thus, the null hypothesis no.3 which states that **"There will be no significant difference in the attitude of rural and urban senior secondary school students towards computer"** stands accepted.

Also from the table 3, it is clear that mean scores of rural and urban senior secondary students were 65.63 and 65.32 respectively. It means that rural and urban senior secondary students possess more or less the same attitude towards computer use and slight difference in value may be due to chance factor.

Findings Of The Study

1. On the basis of 't' value, it is found that there is a significant difference in the attitude of senior secondary school students towards computer with respect to gender.
2. It is clear from table 2 that there is no significant difference in the attitude of senior secondary school students with respect to their academic stream.
3. On the basis of 't' value, it is found that there is no significant difference in the attitude of senior secondary school students towards computer with respect to their locality.

Conclusions And Disscussion Of The Results

One of the findings indicates that female senior secondary students possess more favourable attitude towards computer use. Our results also get support from the studies of Badagliacco. (1990), Busch (1995), Collis and Williams (1987), Rosen (1987), Levin and Gordon (1989) who have also shown the same results with respect to gender. It means that various schemes and policies of government for raising the level of girls' education have really succeeded in achieving their aims. This is a welcoming step and hence, it is suggested that these schemes be continued with more zeal. Contrary to this, male senior secondary students have less favourable attitude towards computer use. It is required that male senior secondary students should also be encouraged and motivated towards the computer use.

Another finding of the study shows that arts and science as well as rural and urban senior secondary students have more or less similar attitude towards computer use. It means that stream and locality do not have much influence on the attitudinal change of secondary school students towards computer use.

References

Aziz and Hassan (2012). A Study on the Factors Affecting Students' Attitude Towards Computers. *Journal Language in India Strength for Today and Bright Hope for tomorrow, 12, ISSN 1930-2940.*

Badagliacco, J.M (1990). Gender and Race Differences in Computing Attitudes and Experience. *Social Science Computer Review, 18(1), 42-63.*

Bovee (2007). To Study the Computer Attitude of Primary and Secondary Students in South Africa. *Journal Computers in Human Behaviour-COMPUT HUM BEHAV, 23(4), 1762-1776.*

Bradley, G. and Russell, G. (1997). Computer Experience, School Support and Computer Anxieties. *Educational Psychology, 17(3), 267-284.*

Brosan, M and Lee, W. (1998). A Cross-cultural Comparison of Gender Differences in Computer Attitude and Anxieties: The United Kingdom and Hong Kong. *Computers in Human Behaviour, 14(4), 559-577.*

Busch (1995). Gender Differences in Self-efficiency and Attitude Towards Computers**.** *Journal of Educational Computing Research, 12, 147-158.*

Collis, B.A. and Williams (1987) Difference in Adolescents' Attitude Towards Computers and Selected School Subjects. *Journal of Educational Research, 8, 17-27.*

Kalhotra, S.K. (2012). A Comparative Study on the Attitude of Higher Secondary School Students of Jammu Region Towards Computer Education. *Indian Stream Research Journal, 2(11), 1-4.*

Levin, T. and Gordon. (1995). Gender Differences in Self-Efficiency and Attitude Towards Computers. *Journal on Educational Computing Research, 12, 147-158.*

Sharma, A.K. (2004). A Comparative Study of Attitude Towards Computer Education Among Senior Secondary School Students of H.P. *M.Ed. Dissertation, Shimla, H.P. University.*

Smith, Caputi and Rawstorne (2000). Differentiating Computer Experience and Attitude towards Computer: An Empirical Investigation, *Computers in Human Behaviour, 16, 59-81.*

Taghavi, S.E. (2006). To Examine Undergraduate Students' Attitude Towards Computers. *Journal of Information Technology Impact, 6(1), 1-8.*

Yalcinalp, Serpil (2005). A Study of Students Self-Efficiency, Performance and Attitude Towards Computers and Internet in a Computer Literacy Course at Freshman. *Journal of Personality and Social. Psychology, 35, 125-139.*

Yushau, B. (2006). Computer Attitude, Use, Experience, Software Familiarity and Perceived Pedagogical Usefulness: The Case of Mathematics Professor. *Eurasia Journal of Mathematics, Science and Technology Education, 2(3), 1-7.*