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Impact of Use of Computer's on Vocational Interest of Higher Secondary School Students at Agra District

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Abstract

The present study explored the impact of use of computer on vocational interest of higher secondary school students. The main objectives of the study were: 1. To study the vocational interest of users and non-users of computer, 2.To compare the vocational interest of students who are users and non- users of computers. 3. To see the interactional effect of independent variables like sex, board, users and non users of computers on vocational interest. The ex-post-facto method of survey research has been used in the study. 180 students of different boards have been selected in the sample. The investigator has selected Vocational interest record by Dr.S.P Kulshrestha (1978). The findings showed there is a significant difference between vocational interest of male and female which indicates the effect of gender on vocational interest. The results indicated the difference in the vocational interest of male and female users and non- users of computers. The interactive effects of the variables under study lead to the conclusion, that the use of computer enhances the vocational interest of secondary school students and playing a major role in selection of their vocation.

Keywords: Use of Computer, Higher Secondary School Students, Vocational Interest.

Introduction

Adolescence is a stage of development from childhood into adulthood. It is a natural phenomenon common to every human being. Now, one of the most crucial decisions that a young adolescent must make is the selection of a vocation during his or her education. This process begins from his childhood when he is asked his interest in the different streams of education whether he wants to become doctor or engineer. Few decades ago no one was more conscious of education and career but now education is must and for all. Now Globalization has made everything possible.

Now the children of modern India has become more career oriented and more conscious of their career and status. They want to be economically independent to get rid of the control and supervisions of their parents. Vocation gives them a sense of self- sufficiency, security and achievement. They find themselves on the term firm in life as soon as they enter some vocation of their choice. Thus, vocation has attained a place of paramount importance in the life of students.

It is obvious that nobody is fit for every vocation. Neither any one can do every work with competence; there are a number of vocations in the world of work. They can be classified into broad areas such as executive, humanitarian etc. The vocation in one area differs from those in other in respect of the abilities and skills needed to achieve success in them and in respect of the nature of the work achieving and work values viz. Opportunity for progress, social prestige, economic gains, aventurines, security, opportunity to be creative etc. As a man has a personality so has a vocation. **Koszalka A. Tiffany (2003)** in his study on "Technology Resources as a Mediating Factor in Career Interest Development." found that the use of web resources may play an important role in strengthening or weakening the predictive nature of career determining predisposition factors and the development of science career interest in adolescents. There was also evidence that as students began to mature and develop their own conceptions of who they were and who they wanted to be, exploratory and learning experiences in school influenced their career interests. **Blustein et al. (1994)** found that during adolescence strong

relationships were formed between progress toward making career decisions and participating in exploratory activities. Being able to explore career-related information, participate in career-specific activities, and work with the people and tools of many different careers provided students with the feedback and reinforcement important to developing career interest and making career decisions.

Vocational interests are one of the most enduring and compelling areas of individual differences and the most popular means for characterizing, comparing, and matching persons and environments (**Hogan & Blake, 1996).** Interests have received substantial empirical attention in areas of vocational choice, educational and vocational counseling, career development, personnel selection, motivation, job satisfaction, job stress and occupational success **(Clark, 1961).**

The present age of computer and internet has brought a revolution in the market and jobs are available at the click of the mouse. Many websites load profiles of successful persons thus influencing adolescent vocational choices. Now computer is not for making project or searching some interesting tuff. It is widely used by people to connect with the influential people in all over the world.

Emergence and Justification of the Problem

Most Indian children now have access to computers and are using them for everything from playing games to doing schoolwork to chatting with friends' via-email to surfing the web.

Surveys on parents suggest that they buy computers and subscribe to internet access to provide educational and occupational opportunities for their children and to prepare them for the "Information age". **(Welch 1995)**

Computer scientists at one time predicted that computers would be used widely in schools for individualized instruction some zealous technology proponents even foresaw the day when each student would have his or her own computer in the class room. **(Dunn and Geisert, 1990).**

Computer programs certainly provide explicit, systematic information that anyone with a sequential mind should be able to follow. Actually, computer illiteracy may be attributable to exactly that fact: not everyone does process information sequentially, the style in which most software is presented. Indeed, whether or not specific software responds to how an individual learns and thinks depends on the learning of the student that helps them to choose specific vocation of their interest.

In India, because of the impact of modernization the lives of students have also been changed. The traditional way of learning and thinking has been changing day by day, students instead of spending their time in libraries and reading books spent their time in cyber cafes. Students using computers not only for their project and assignment but also for net surfing which opens a gate of different vocations like mass media, entrepreneurship, online business through social media and so on. Therefore, it is important to know the effect of computers on vocational interest of adolescents.

Thus, more research that is systematic needed in these areas to know about the use of computers, and its impact on adolescents' vocational interests to maximize the positive effect and minimize the negative effect of computers in adolescents' lives. Through this study, the investigator will investigate the following:

To what extent are computers enhancing the vocational preferences of adolescents?

Definition of the Terms

The definitions are as follows:

Computer

A computer is an electronic machine that can store, organize and find information do calculations and control other machines. **(Oxford Advanced Learner's dictionary)**.

The computer is a flexible as well as powerful device enabling the use of multimedia technologies to recuperate, evaluate, store, produce, present and exchange information which can cater to the needs of students by storing, processing and retrieving information.

Vocational Interest

Vocational Interest, as defined by **Holland (1997)** is an expression of an individual's personality in work, school subjects, hobbies, recreational activities and preferences. In short vocation is an occupation for which a person has a liking and aptitudes.

Higher Secondary School Students

A secondary school student is defined as a student studying in high school getting knowledge of general, vocational, technical or college preparatory courses.

Objectives of the Study

1. To study the vocational interest of students who are users and non-users of computer.
2. To compare the vocational interest of students who are users and non -users of computers.
3. To study the interactional effect of independent variables: sex, boards and use of computer on dependent variable, vocational interest of students.

Hypothesis of the Study

1. There will be no significant impact of use of computers on the vocational interest of secondary school students.
2. There will be no significant difference between the vocational interest of students who are users and those who are non-users of computers.
3. There will be no significant interactional effect of independent variables: sex, board and computer users and non users on dependent variable vocational interest of students.

Method of the Study

In the present study, the researcher has used Ex-post-facto method of survey research.

Sample

A simple random sampling method has been used in the present study. The targeted sample included the students of 10^{th} Class studying in

intermediate college affiliated to U.P. Board, CBSE Board and ICSE Board. To study the vocational interest of the students 30 boys and 30 girls selected from each board of Agra city.

Delimitation of the Study

The present study delimited to 180 students of class 10th of both sexes of Agra city.

Tool Used in the Present Study

Dr. S.P Kulshrestha (1978), Vocational interest record was used to know the interest of students in the present study.

Data Analysis and Discussion of the Results

To Study the Vocational Interest of Students who are Users and Non Users of Computer.

Table 1.1
Exhibiting Descriptive Statistics of Vocational Interest of Students

Variable	N	Mean	S.D	Skewness	Kurtosis
Vocational Interest	180	86.25	19.29	.133	.797

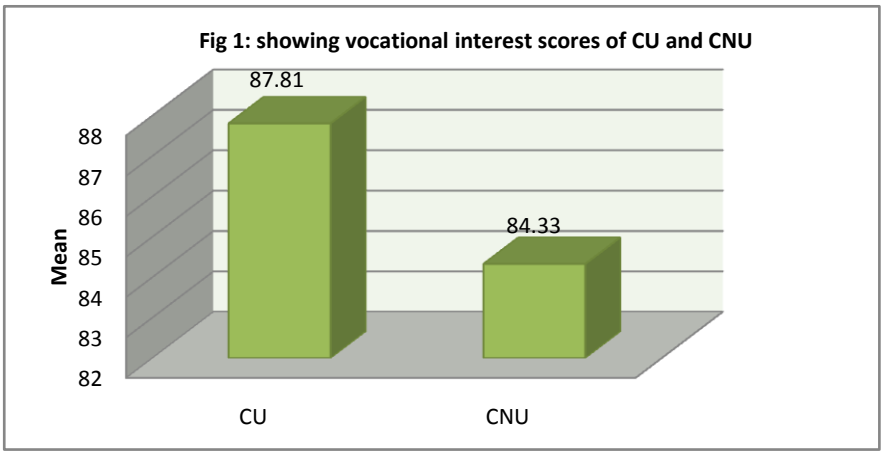
The table 1.1 shows that the mean value of scores of Vocational Interest of secondary school student found 86.25. The standard deviation of score secondary school students is found to be 19.29, which indicate slight heterogeneity among the scores of students. The score of vocational interest in-group is found to be negatively skewed and leptokurtic in nature.

Statistical values of Vocational interest scores of computer user and computer nonuser have been shown in the following table.

Table 1.2
Exhibiting Descriptive Statistics of Vocational Interest Scores of Computer User and Computer Nonuser

Group	N	Mean	S.D	Skewness	Kurtosis
CU	90	87.81	18.87	.100	.100
CNU	90	84.33	19.76	.398	.77

The distribution of vocational interest scores for computer users and non -users is found positively skewed and indicating that frequencies are concentrated towards higher side of distributions. The S.D. value is high for computer non-users and it is indicating about more heterogeneity between these two groups.



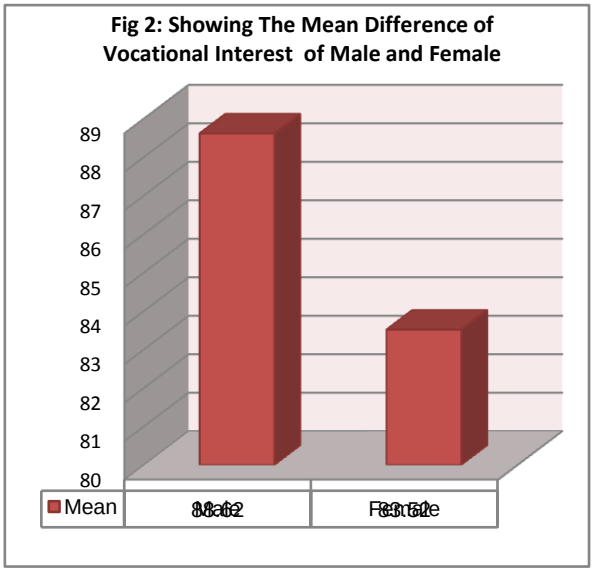
To Study the Vocational Interest Scores of Male and Female Students

In order to study and compare the vocational interest of male and female students the Mean, S.D and 't' test has been computed, the detailed calculation are exhibited in the following table.

Table 1.3
Showing Thevocational Interest Scores of Male and Female Students

Group	N	Mean	S.D	C.R	Level of Significance
Male	90	88.62	20.29	1.78	.05
Female	90	83.52	18.11		NS

The C.R value shown in above table indicates that there is no significant difference between the means of vocational interest of female students and male students. So, the null hypothesis i.e. there is no significant difference between the Vocational interest of students' sex wise is accepted.



To Study The Vocational Interest of Computer Users and Non Users in Relation to Different Boards

For determining the Vocational Interest of the computer users and non users the scores were recorded in the ten broad areas of Vocational Interest according to manual and the means of the scores of total sample was calculated.

The total sample comprised students from three boards viz. U.P.CBSE, ICSE. It was considerd important to examine the pattern of vocational interest in relation to boards.In pursuance of this objective the vocational interest of the students of these boards were analysed separaty.

Table 1.4
Showing Mean and Rank Order of the Vocational Interest of the Students Who are Users and Non Users of Computer of ICSE Board

S. No.	Areas	Mean CU	Mean CNU	Rank Order	
				CU	CNU
1.	Literary	11.73	11.43	II	II
2.	Scientific	14.30	13.30	I	I
3.	Executive	8.23	9.50	VI	III
4.	Commercial	8.70	8.80	V	V
5.	Constructive	7.26	8.60	VII	VI
6.	Artistic	9.33	9.43	III	IV
7.	Agriculture	9.12	5.53	IV	IX
8.	Persuasive	6.43	6.50	IX	VIII
9.	Social	6.93	6.93	VIII	VII
10.	Household	4.23	4.06	X	X

The above data shows that users and nonusers of computer in ICSE board they are interested in four main areas of vocation viz Literary.Scientific.Artistic and Executive both in the case of CU and CNU .This is found to be in agreement with the course of study they had chosen .This fact may be explained in this way that because the students are using technology in their day today life and getting computer facilities at home and in school.

Table 1.5
Showing Mean and Rank Order of the Vocational Interest of the Students Who are Users and Non Users of Computer of U.P Board

S. No.	Areas	Mean CU	Mean CNU	Rank Order	
				CU	CNU
1.	Literary	9.80	10.70	VI	I
2.	Scientific	9.76	9.36	VII	V
3.	Executive	13.20	10.46	II	II
4.	Commercial	7.16	7.93	IX	IX
5.	Constructive	4.73	8.20	X	VIII
6.	Artistic	10.33	10.30	V	III
7.	Agriculture	7.40	9.26	VIII	VI
8.	Persuasive	10.43	8.86	III	VII
9.	Social	13.36	9.56	I	IV
10.	Household	10.40	7.60	IV	X

In the above table we can see that the students of U.P boards are interested in different areas of vocation like Social,Persuasive,Literary and Executive and less interest show in scientific and commerecial areas.This is because of their less exposure to technology.

Table1.6
Showing Mean and Rank Order of the Vocational Interest of the Students Who are Users and Non Users of Computer of CBSE Board

S. No.	Areas	Mean CU	Mean CNU	Rank Order	
				CU	CNU
1.	Literary	9.96	10.56	II	I
2.	Scientific	12.36	10.56	I	I
3.	Executive	7.33	9.20	VI	II
4.	Commercial	7.86	8.03	IV	IV
5.	Constructive	6.83	6.73	IX	VI
6.	Artistic	9.93	8.56	III	III
7.	Agriculture	6.76	5.40	X	VIII
8.	Persuasive	7.16	6.33	VIII	VII
9.	Social	7.83	6.93	V	V
10.	Household	7.20	4.30	VII	IX

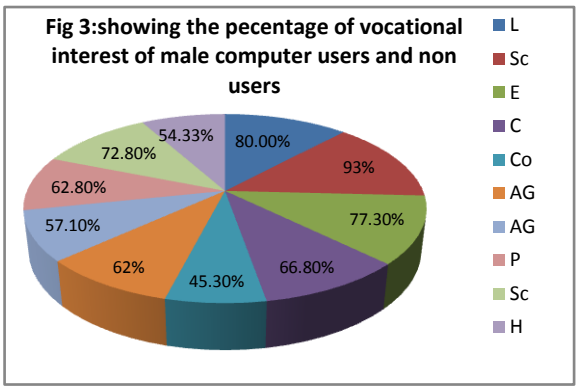
The above data shows that users and nonusers of computer in CBSE board they are interested in four main areas of vocation viz Literary, Scientific, Artistic and Executive both in the case of CU and CNU. This is found to be in agreement with the course of study they had chosen. This fact may be explained in this way that because the students are using technology in their day today life and getting computer facilities at home and in school.

To Compare The Vocational Interest of Male Who are Users and Nonusers of Computers

For analyzing the above objectives, the researcher has used the statistical techniques viz percentage as shown in table:

Table 1.7
Showing Percentage of the Vocational Interest Male Users and Non Users of Computer

S. No.	Areas	Percentage	
		CU	CNU
1	Literary	80%	80.3%
2	Scientific	93.3%	91.1%
3	Executive	77.3%	77.1%
4	Commercial	66.8%	57.8%
5	Constructive	45.3%	55%
6	Artistic	62%	64%
7	Agriculture	57.1%	57%
8	Persuasive	62.8%	60.1%
9	Social	72.8%	68.6%
10	Household	54.33%	45.33%



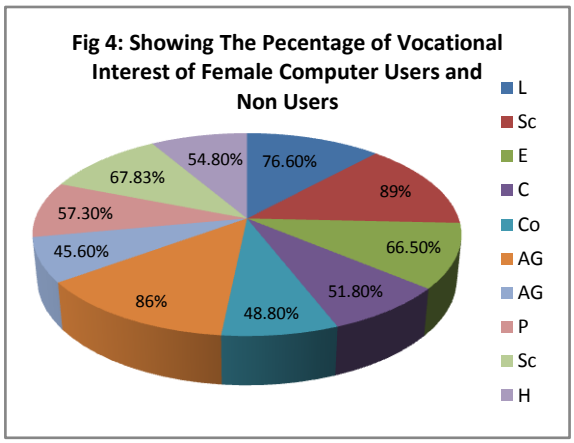
The above table and diagram shows that the male computer users and non users vary in their interest areas the CU and CNU both are interested in scientific, literary and commercial area of vocational interest.

To Compare the Vocational Interest of Female Who are Users and Nonusers of Computer.

Table 1.8

Showing The Vocational Interest of Female Who are Users and Nonusers of Computer

S. No.	Areas	Percentage	
		CU	CNU
1	Literary	76.6%	83.1%
2	Scientific	89%	75%
3	Executive	66.5%	68.6%
4	Commercial	51.8%	66%
5	Constructive	48.8%	62.6%
6	Artistic	86%	77.5%
7	Agriculture	45.6%	44%
8	Persuasive	57.3%	48%
9	Social	67.83%	48.5%
10	Household	54.8%	34.5%



The above table and diagram shows that the female computer users and non users vary in their interest areas beacause CU are interest in scientific area CNU are interested in Literary area of vocational interest.

Interactional Effect of Use of Computers on Vocational Interest of Highersecondary School Students

The researcher has studied the effect of sex, boards and use of computer on Vocational Interest of students separately but to know their interactional effect combinedly, the investigator has calculated 3x2x2 factorial analysis of variance to test the following sub hypothesis.

The following null hypothesis formulated to study the interactional effects of the IVs under study on the respective DVs.

1. There is no interactional effect of use of computer and boards on Vocational Interest scores of students.
2. There is no interactional effect of use of computer and sex, on Vocational Interest scores of students.
3. There is no interactional effect of sex and board on Vocational Interest scores of students.
4. There is no interactional effect of use of computer, boards and sex on Vocational Interest scores of student.

Table 1.9

Research Paradigm: Mean Values of Style of Learning and Thinking Scores of Secondary School Students

		User A_1	Non User A_2	Total	Total
Male B_1	U.P C_1 CBSE C_2 ICSE C_3	M = 96.20 N = 15 M = 87.46 N = 15 M=85.40 N=15	M=96.40 N = 15 M = 78.46 N = 15 M=87.80 N=15	C_1 M=94.43 N=60 C_2 M=79.95 N=60	B_1 M=88.62 N=90
Female B_2	U.P C_1 CBSE C_2 ICSE C_3	M = 97.00 N=15 M=79.06 N=15 M=81.73 N=15	M = 88.13 N = 15 M = 74.80 N=15 M=80.40 N=15	C_3 M=83.83 N=60	B_2 M=83.52 N=90
Total	A1 M=87.81 N=90		A_2 M = 84.33 N = 90		

Summary of Anova

Table 1.10

Showing Summary of Anova

Source	S.S.	df	M.S.S.	F	P
Between A	544.281	1	544.281	1.589	<.01
Between B	1170.458	1	1170.458	3.75	>.01
Between C	440009.54	2	220004.7	642.3	>.01
AxB	667737.83	1	667737.83	1949.4	>.01
BxC	438709.19	2	219354.59	640.4	>.01
AxC	5975.364	2	2987.68	8.722	>.01
AxBxC	1544797.693	2	772398.8	225	>.05
Among S.S.	57542.1	168	342.52		
Total	66891.07	179			

The table 1.10 clearly indicates the effect that the value of F for factor A is insignificant at .01 levels, thus hypothesis I is accepted to confirm the significant independent effect of use of computer on vocational interest of students.

The value for factor B is significant at the .01 level so, the null hypothesis is rejected and the effect of sex is significant with respect of vocational interest.

The value of 'F' for interactional AxB is significant at .01 levels. Therefore, the null hypothesis is rejected and the interactional effect of sex and use of computer on vocational interest is justified.

The F value .083 for factor C is higher than the table value at .01 level of significance and thus it can strongly be said that UP.CBSE and ICSE board have difference in their vocational interest. In the case of AXC the calculated value of 't' is high then the table value so; the null hypothesis that is there is no significant effect of use of computer and board son vocational interest scores of students is rejected.

The calculated 'F' value for interaction of BXC (Boards and Sex) is significant at .01 level, which thus indicates that either sex or boards when combined with the use of computer, effects the

vocational interest of students so if we want to increase their interest level of young generation, we have to provide the environment for using computer frequently.

Lastly the F value for the interactional effect of all the three independent variables - AxBxC i.e. use of computer x boards x sex, the significant value of 'F' –225 directs the researcher for rejection of null hypothesis and confirms the view that all the three variable combinedly effect the Vocational interest of adolescent.

Conclusion

The above analysis showed use of computer invariably affects the vocational interest of students. The academic achievement increases due to development of critical thinking and scientific inquiry. The vocational interest of users was found to be higher than non- users. This may be attributed to the fact that computers provide many opportunities to update oneself with newer field of study and vocational choice for adolescents.

As reported by **Pendharkar (2001)** who found that use of computer was a determining factor in influencing high school vocational interest.

1. Significant difference found between vocational interest of male and female indicates the effect of gender on vocational interest as also found by **AlMiskry Seif Abdullah, Bakar(2009)** that vocational interest are influenced by gender difference. However, an important finding was that there was a significant difference between the vocational interest of male and female supports the null hypothesis in this case.
2. The interactive effects of the variables under study lead to the conclusion, that the use of computer enhances the vocational interest. Thus, the use of computer develops higher level thinking skills that leads to increased higher achievement and aspiration level in student with respect to vocation.
3. **Koszalk A. Tiffeny in (2003)** found that Boys and Girls in general were more interested in science careers when they participated in science activities outside the class and in classrooms where web resources used regularly.

The result of this study will be helpful for the teacher, specialists and policy makers to prepare such an educational policy which would prompt students to use computer, internet for their educational purposes in projects, assignments and other activities. This would increase their interests in different areas of education.

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