

# A COMPARATIVE STUDY OF COMPUTER PHOBIA AMONG SECONDARY SCHOOL STUDENTS

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**Abstract:** A computer is an electronic device that can perform a variety of operations according to a set of instructions called Program. A computer is an electronic data processing device, which can write, compute, compare, store and process data with high speed, accuracy and reliability. The importance of computers cannot be denied in schools, business world, at work place and even in one's personal life. Computer phobia is a resistance to talking about computers or even thinking about computers. Although technology is taking over all aspects of life, there are up to half of the population is technophobic, possessing negative opinions about, or having anxiety towards, information technology such as personal computers. Many factors have been reported to influence computer phobia. It has been found that computer phobia decreases with increasing experience and knowledge of computer. The present study was conducted to find computer phobia among secondary school students. Descriptive Survey Method of research was used to compare the data of computer phobia among secondary school students. The sample for the study consisted of 320 students of class 8th randomly selected from four government and four private secondary schools located at Faridabad district of Haryana state. The schools were selected on the basis of convenient sampling whereas simple random technique was followed to select the 8th class students. The Computer Phobia Scale developed and standardised by the investigator was used to collect the data. The findings of the study show that majority of secondary school students were experiencing moderate level of computer phobia. The students having extremely high phobia should be motivated to change their perception towards use of computer. The students of rural secondary schools were found to be are more phobic towards computer in comparison to the students studying in urban secondary schools. The girls of secondary schools were found experiencing more computer phobia than the boys of secondary schools.

**Index Terms - Phobia; Computer Phobia; Secondary School Students.**

## I. INTRODUCTION

The computers have created a revolution in the content of education and in the nature of learning process. They have the capability of multiplying the human intellect beyond part conceptions and have tremendous implications for education. They have a great impact on our education system. Computer could also resolve certain problem and derive benefit including reduction in time and make available standard and quality information it will also improve the efficiency of the user. In the field of education it is very useful in teaching- learning process. Therefore computer literacy or knowledge is very much required for teachers as well as students. Computer has become an unavoidable instrument now in all field of human life. Computers have remarkable contributions in today's world. As their size and costs continue to decline, their capabilities are expanding their use becoming easier and common in all walks of life including education.

A computer is a device or Machine for making calculations or controlling operations that are expressions in numerical or logical terms. It can accept data, store data, process data as desired, and retrieve the stored data as and when required and print the results in the desired format. Computing is an important part of everyday life in the twenty first century. Form music and photos to banking and communicating, computers have changed the way we work and live.

Computer is playing a major role to make work more effective and accurate in almost every field. Even it can help us to remember any information for an unlimited time. Computer is used to type documents, send email, and surf internet. It can also be used to handle spreadsheets, according to database management, presentations, games, and desktop publishing, railway reservations, weather forecasting, error detection.

Though computer technology is not a substitute for quality teaching and learning, yet there is need for conscious efforts to utilize computers effectively to enhance teaching and stimulate students' interest in learning.

## II. COMPUTER PHOBIA

A phobia is an intense fear of something that, in reality, poses little or no actual danger. Common phobias and fears include the places, heights, highway driving, flying insects, snakes, and needles etc. Most phobias develop in childhood, but they can also develop in adults. While adults with computer phobia realize that their fear are irrational, they often find that even facing feared situation brings panic attacks or anxieties. If you have a phobia, you probably realize that your fear is unreasonable, yet you still can't control your feelings. Just thinking about the feared object or situation may you anxious. And when you're actually exposed to the thing you fear, terror is automatic and overwhelming.

There is no consensus in the literature on the use of the terms such as computer anxiety, computer phobia, and technophobia. In the studies performed so far this subject has been handled under some titles, computer phobia, techno stress, cyber phobia, computer aversion, technology aversion, technophobia, and computer anxiety.

Although technophobia is becoming a commonly used term, appearing in newspapers and popular magazines with increasing frequency, in a pioneering work, defined computer phobia as;

- A resistance to talking about computers or even thinking about computers,
- Fear or anxiety toward computers and,
- Hostile or aggressive thoughts about computers.

Afterwards, technophobia has come to be known as computer phobia, and has been defined by as; “

- Anxiety about present or future interactions with computers or computer related technology,
- Negative global attitudes about computers, and their operation or their societal impact; and/or,
- Specific negative cognitions or self-critical internal dialogues during actual computer interaction or when contemplating future computer interaction” (Computer phobia is becoming a commonly used term but its definition is still evolving, is little known its extent and causes.

Jay (1981) defined computer phobia as a resistance to talking about computers or even thinking about computers, Fear or anxiety towards computers, Hostile or aggressive thoughts about computers. Computer phobia is commonly believed to mean a fear of computers. However, the term is used quite loosely. It is important to attend a good basic course or use a good self-instruction book. A lot of the people who regularly send emails or surf the Internet have no technical knowledge whatsoever. By self-instruction or by attending a course they have learned the basics in how to use a computer or tablet.

Viruses and spyware are programs that can damage your device, but using a virus scanner and a firewall program on your computer can considerably reduce the risk of viruses and spyware. Computer phobia does not necessarily require actual fear on a person's part but can also be used to describe general suspiciousness of computers. By and large unknowingly have an irrational fear over this electronic machine and hence they keep the Computers as their status symbol. Even many of the teachers also have the irrational fear towards computers. This irrational fear towards computer is known as “computer phobia”

### III. NEED AND SIGNIFICANCE OF THE STUDY

Computer plays an important role in our life and computer education is 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. Phobia is a normal human emotion. Phobia stimulates an anticipatory and adaptive response to challenging or stressful events. Computer phobia is a negative feeling of towards computer technology in which the computer users experience discomfort, stress, or fear in front of computer or using it.

Computers phobia affects virtually all strata of our society from children and adults to seniors and education have an area of a great deal of study and research. Computer phobia is a feeling of being fearful or apprehensive when using or considering the use of computers. Some researchers prefer to apply more technical terms to the phenomena such as ‘Technophobia’, ‘Cyber phobia’. While technophobia refers to a general fear of all things technological, Cyber phobia focuses more specifically on computers. “Phobia itself is defined as a painful uneasiness of mind or an abnormal apprehension of fear often accompanied by psychological change such as sweating or increased pulse.”

The research may be advantageous in order to know computer phobia among secondary school students and may be helpful to government bodies, stake holders, administrators and policy making bodies in order to frame curriculum for secondary school students and to remove computer phobia among them.

### IV. STATEMENT OF THE PROBLEM

The study under investigation is entitled as,” **A Comparative Study of Computer Phobia among Secondary School Students.**”

### V. OBJECTIVES OF THE STUDY

Keeping in view the above background the study has following objectives:

1. To find computer phobia of secondary school students.
2. To find computer phobia of Government secondary school students.
3. To find computer phobia of Private secondary school students.
4. To find computer phobia of students of urban secondary schools.
5. To find computer phobia of students of rural secondary schools.
6. To compare computer phobia between Government and private secondary school students.
7. To compare computer phobia between boys and girls of secondary schools.
8. To compare computer phobia between students of urban and rural secondary schools.

### VI. HYPOTHESES OF THE STUDY

1. In the light review of literature, objectives and problem, following null hypothesis are formulated:
2. There will be no significant difference between government and private secondary school students with respect to their computer phobia.
3. There will be no significant difference in computer phobia between boys and girls of secondary schools.
4. There will be no significant difference in computer phobia between students of urban and rural secondary schools.

## VII. DESIGN OF THE STUDY

Descriptive Survey Method of research was used to know computer phobia among secondary school students. A survey method was used to collect data to test the hypotheses. Computer Phobia Rating Scale (CARS) developed and standardized by the investigator was used to collect the data.

**Population:** The population of the study comprised of students studying in class 8th in secondary schools located at Faridabad district of Haryana.

**Sample of the study:** The sample for the study consisted of 320 students of class 8th randomly selected from four government and four private secondary schools located at Faridabad district of Haryana state. The schools were selected on the basis of convenient sampling whereas simple random technique was followed to select the 8th class students.

## VIII. TOOLS USED IN THE STUDY

“Computer Phobia Rating Scale” developed and Standardized by the investigator was used for data collection.

## IX. DELIMITATION OF THE STUDY

1. Only Secondary School students were selected as a sample of study.
2. Only 8th standard students of Faridabad district were taken as a sample of study
3. Both Government and private secondary school students were taken for study.

## X. ANALYSIS AND INTERPRETATION

To study the computer phobia of secondary school students, raw scores obtained by administering the computer phobia scale on secondary school students were converted into standard scores and the number of secondary school students was counted at various level of computer phobia. The investigator collected the data and tabulated them. The statistical methods like mean, standard deviation, z-score and critical ratio were calculated. The raw scores of computer phobia of secondary school students were converted into standard scores.

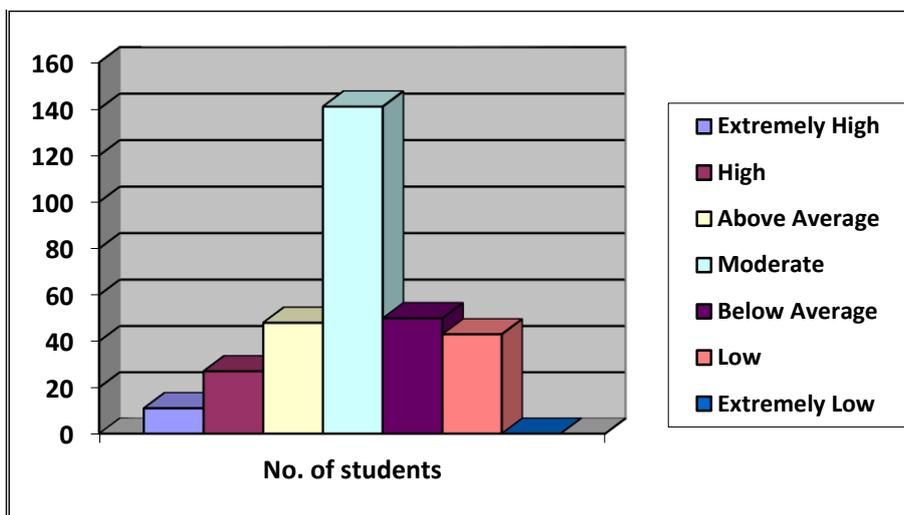
**Computer Phobia among Secondary School Students:** The table 1, given below shows the ranges of raw scores, ranges of z-scores, various levels of computer phobia ranges and number of students under various levels of computer phobia.

S. N.	Range of Raw Scores	Range of z-scores	Level of Computer Phobia	No. of students
1	141 & above	+2.01 & above	Extremely High	11
2	122-140	+1.26 to +2.00	High	27
3	102-121	+0.51 to +1.25	Above Average	48
4	75-101	+0.50 to -0.50	Moderate	141
5	56-74	-0.51 to -1.25	Below Average	50
6	36-55	-1.26 to -2.00	Low	43
7	35 & below	-2.01 & below	Extremely Low	0
	Total			320

On analysing the data of level of computer phobia of 320 secondary school students it was concluded that 11 students of secondary schools were found at extremely High level of computer phobia while 27 students were found under High level, 48 students were at above average level, 141 students at moderate level, 50 students at Below Average level, 43 students at Low and not a single student of secondary schools were found at extremely Low level of computer phobia. From the collected data it has come to know that the maximum number of secondary school students was found under moderate level of computer phobia.

Majority of secondary school students had moderate level of computer phobia. Least number of secondary school students was found under extremely low level of computer phobia. The students having extremely high phobia should be motivated to change their perception towards use of computer.

Graph 1 given below shows the number of secondary school students under various levels of computer phobia.



Graph 1: Number of Secondary school students Under Various Levels of Computer phobia

Graph 1 shows that majority of secondary school students were found under moderate level of computer phobia. Only a few of them were found under extremely high and not a single student was found under extremely low level of computer phobia.

**Comparison of Computer Phobia between Government and Private Secondary School Students:** The table 2 shows relevant statistics i.e. mean, standard deviation (SD), and t- ratio between the mean scores of computer phobia of government and private secondary school students.

Students	N	Mean	S.D.	t-value	Remarks
Government Schools	160	92.13	27.45	2.71	Significant
Private Schools	160	84.23	24.54		

It is clear from table-2 that the mean score of computer phobia of 160 students of Government secondary schools was calculated to be 92.13 with standard deviation 27.45 while the mean score of computer phobia of 160 students of private secondary schools was calculated to be 84.23 with standard deviation 24.54 which is slightly less than the mean scores of the students of government secondary schools.

The calculated t-value of mean scores of computer phobia between government and private secondary school students was calculated to be 2.71 which is greater than the tabulated t- value (1.96) at 0.05 level of significance. On analyzing the data it is clear that two groups differ significantly on their computer phobia scale.

It is clear from the mean scores of the data of computer phobia of government and private secondary school students that the government school students were having more computer phobia in comparison to private school students.

**Comparison Of Computer Phobia Between Boys And Girls Studying In Secondary Schools:** The table 3 shows relevant statistics i.e. mean score of computer phobia, standard deviation (SD), t- ratio and actual number of boys and girls of secondary schools in terms of computer phobia.

Group	N	Mean	S.D.	t-value	Level of significance
Boys	160	86.33	27.06	1.26	Insignificant
Girls	160	92.68	25.45		

It is clear from table-3 that the mean scores of computer phobia of 160 boys of secondary school was calculated to be 86.33 with standard deviation 27.06 which is slightly less than the mean scores of 160 girls of secondary schools i.e. 92.687 with standard deviation 25.45. This shows that the girls are more anxious towards the use of computer in comparison to their boys of secondary schools.

The calculated t-value of mean scores of computer phobia between boys and girls studying in secondary schools was calculated to be 1.26 which is less than the tabulated t -value (1.96) at 0.05 level of significance. So, it is clear that the boys and girls do not differ significantly on the level of their computer phobia. Thus, the hypothesis, which reads as, “There will be no significant difference in computer phobia between boys and girls of secondary school is accepted.

It is evident that the mean score of computer phobia of girls is greater than the mean score of computer phobia of boys of secondary schools which is statistically not significant. It means that the boys and the girls of secondary schools do not differ significantly in their computer phobia scale.

**Mean Comparison of Computer Phobia between Urban and Rural Students:** The table 4 given below shows relevant statistics i.e. mean scores of computer phobia, standard deviation (SD), t- ratio and actual number of urban and rural students.

Group	N	Mean	S.D.	t-value	Level of Significance
Urban	160	84.34	25.16	2.62	Significant
Rural	160	92.03	27.16		

It is clear from table-4, that the mean score of computer phobia of 160 urban students was calculated to be 84.34 with standard deviation 25.16 which is less than the mean scores of rural students i.e. 92.03 with standard deviation 27.16. This shows that the urban students are more favourable towards use of computer in comparison to the students studying in rural secondary schools. Both the groups differ in the scale of computer phobia.

On analyzing the data, it is clear that two groups differ significantly on their computer phobia as the t- value between the mean scores between computer phobia of the students of secondary schools located in urban and rural area is calculated to be 2.62 which is greater than the tabulated t -value (1.96) at 0.05 level of significance. Thus, there is significant difference in computer phobia between the students studying in secondary schools located in urban and rural area of Faridabad. The reason behind may be the locale.

## XI. DISCUSSION

A slight difference of the mean scores of computer phobia was found between the boys and girls of secondary schools of Faridabad which is statistically not significant. Girls were supposed to be more anxious towards use of computer. Gender difference is not to be seen in the level of computer phobia. The girls were found to be experiencing more phobic than the boys, the reason behind it, that the girls were not frequently using computers. A significant difference was found in computer phobia between the mean scores of urban and the rural students' studying in secondary schools of Faridabad. The rural students studying in secondary school were found to be more anxious towards use of computer in comparison to their counterpart the students studying in urban area. The reason behind is that the urban students were not frequent and usual in use of computers.

The government should provide good infrastructure and computer facilities to the students of rural schools. The teachers should be trained working with computers in order to make students capable to work with computers. If all the facilities related to computers are good, automatically the computer phobia of the students will decrease. So those whom are involved in this computer work must be competent enough to work with computers. Computer phobia can be removed as a result of learning experience with computers. Urban students are supposed to be more familiar towards use of computer, hence, they were found to be working with computers without fear. The study of Shukla and Srivastava (2001) supports the findings.

In India most of the student belongs to rural areas and computer technology to a large extent is English based. So they are unable to work with computers easily. In today's world the use of computers has become a part of daily life of an individual. It has almost become an extension of the self rather than a mere tool. In this context if students develop computer phobia, it affects their own learning as well as the ability of the computer. Keeping in view of above discussion it can be said that the computer is an important tool for making classroom teaching learning effective, so the students must not have any computer phobia.

## XII. MAJOR FINDINGS

- The major findings of the study are given below:
- Majority of secondary school students were found to be under moderate level of computer phobia. Least number of secondary school students was found under extremely low level of computer phobia. The students having extremely high phobia should be motivated to change their perception towards use of computer
- Majority of Government secondary school students were found under moderate level of computer phobia. Not a single student of Government secondary schools was found under extremely low level of computer phobia.
- Majority of students of private secondary schools (41.87%) students were found under moderate level of computer phobia while not a single student of private secondary schools was found under extremely low level of computer phobia.
- Only 2.5% students of urban secondary schools were found under extremely high level of computer phobia and 43.75% students were found under moderate level of computer phobia while not a single student of urban secondary schools was found under extremely low level of computer phobia.
- Only 4.375% students of rural secondary schools were found under extremely high level of computer phobia and 44.37% students were found under moderate level of computer phobia while not a single student of rural secondary schools was found under extremely low level of computer phobia.
- It is clear from the mean scores of computer phobia of the students of government and private secondary schools, the government school students were having more computer phobia in comparison to private school students.
- The boys and girls do not differ significantly on the level of their computer phobia. It is evident that the mean scores of computer phobia of girls is greater than the mean score of computer phobia of boys of secondary schools which is statistically not significant. It means that the boys and the girls of secondary schools do not differ significantly in their computer phobia scale.
- There is a significant difference in computer phobia between the students studying in secondary schools located in urban and rural area of Faridabad. The reason behind may be the locale.

## XIII. CONCLUSION

Computer is an inevitable tool in every sphere of life. It has become an essential part of our life. Computer phobia is a 'fear of using computer even though talking about computer'. The students of private schools use computer frequently, so they do not have fear of computer but it is found that the students of government secondary schools had computer phobia in their mind. The students of government secondary schools possess negative attitude towards computers and it prevents them from reaping learning benefits of computer technology. The students of secondary schools of rural area were found to be more anxious towards use of computers than the students of secondary schools of urban area because the students of rural secondary schools were not having better

computer facilities in their schools, so, to remove computer phobia among them it is necessary to avail them better computer facilities in their schools. It is required that female students should also be encouraged and motivated towards the computer use in order to reduce their computer phobia. The government at all levels should provide computer facility for each and every student in schools. Adequate training in the use of computer tools should be stressed in the curriculum of the teacher-trainees and government should appoint skilled and trained teachers to teach computer as a subject in schools. All students must be familiar with and even competent in using computers because this technology dominates all avenues of our societal as well as personal life.

#### XIV. EDUCATIONAL IMPLICATIONS

Students of secondary schools may differ in the scale of computers phobia but they must be prepared to work with computers conveniently. Therefore in school education computer should be a subject to make the students familiar with computer operations. Computer Phobia of the Secondary school students depends on the their learning to computer and teachers' interest to make the students competent enough to work with computer. Thus it is the duty of the teachers to remove computer phobia among secondary school students. Computer Phobia among boys and girls of secondary schools may depend on various aspects such as type of schools, school system, locality of school, study habit and use of computer in teaching and learning.

In view of our findings following educational implications can be laid down:-

- Appropriate ongoing professional development programmes should be undertaken in schools to promote computer competency among secondary school students.
- Teachers, parents and stake holders at all level should be conscious enough to care students regarding computer education in all educational activities in and out of school.
- In schools a relaxed computer learning atmosphere must be created and extra classes should be provided to more phobic students to teach computers to remove their computer phobia.
- Government should take more initiatives to provide computer training course among the rural based government students.
- Meet the individual learning needs of students and assist each student to maximize his or her learning outcomes by using computers.
- Provide a verbal and written outline to students for proper use of computers and separate computer training programmes should be provided to weak students.
- Specialized courses on a range of topics, such as computer applications across the curriculum and class room management should be organized.
- Teacher should undertake the varying problems related to computers of different students and try to reduce them.
- Teachers should have positive attitude towards computer in order to remove computer phobia among secondary school students.
- The school authorities should come forward to provide more computer based training to government school female students.
- Various seminars and lectures by the experts should be arranged to give better computer education to students practically in real life situation.

#### XV. SUGGESTIONS FOR FURTHER RESEARCH

1. A comparative study of computer phobia of rural and urban school students should be under taken comparing with college students on a larger sample.
2. A study may be conducted to know the effectiveness of students training programmes, and workshops and refresh courses in order to remove computer phobia among students.
3. A similar study may be conducted to identify the techniques and devices to enhance computer competencies and reduce computer phobia among students.
4. A similar study may be conducted in determining the pros and cons of computer training in reducing computer phobia among them.
5. Further research may be conducted to design the quality of instruction in relation to computer phobia reduction.

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