

MEASUREMENT OF COMPUTER PHOBIA AMONG STUDENT TEACHERS

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ABSTRACT

In present scenario computer has become vital part of our daily life. Our almost all activities are associated directly or indirectly with the computer. As Information Technology, computer has made considerable influence on every aspect of society as well as education system. Now a days people are working with computer in different way, but many of them may have irrational fear over the computer as an electronic machine. This irrational fear towards computer is known as computer phobia (S.Rajasekar & Vaiyapuri Raja 2006,p.108). Ursavas O.F. & Karal H. (2009,p.71) have cited similar term for computer phobia as computer anxiety, technophobia, techno stress, cyber phobia and computer aversion. They have been defined computer phobia as: “(a) Anxiety about present or future interactions with computers or computer related technology, (b) Negative global attitudes about computers and their operation or their societal impact, (c) Specific negative cognitions or self-critical internal dialogues during actual computer interaction or when contemplating further computer interaction.” However, as George A., Christin E. & Laura D. (2008,p.336) cited Simonson’s definition of computer anxiety as “The fear of apprehension felt by individuals when they use computers, or when they consider the possibility of computer utilization.”

INTRODUCTION

Whereas Steven H.(1990,p.10) have discussed compendiously regarding computer phobia in his study. He had drawn out physical symptoms of computer phobia. He mentioned that computer phobia or cyber phobia refers to an intense anxiety about computers which can actually produce a series of physical symptoms ranging from sweaty palms, dizziness, shortness of breath, heart pounding and feelings of unreality.

According to many studies, highly computer phobic individual will be at a significant disadvantage compared to his or her peers. So it would be necessary to know such types of phobia level among pre service teachers at the beginning stage of training course. Thus present study has been undertaken to determine the level of computer phobia among student teachers in respect to their gender, main stream and regionality. Findings of the study regarding various aspects of computer phobia will be useful for training about computer and Information technology course to student teachers.

Objectives

1. To determine the level of computer phobia of student teachers.
1. To study the computer phobia of student teachers with respect to gender.
2. To study the computer phobia of student teachers with respect to their main stream.
3. To study the computer phobia of student teachers with respect to their geographical zone.
4. To find out the relationships between the components of computer phobia.

Hypotheses

1. There is no significant gender difference in computer phobia of student teachers.
2. There is no significant main stream difference in computer phobia of student teachers.
3. There is no significant geographical zone difference in computer phobia of student teachers.

4. There is no significant correlation between subscales of computer phobia scale.

Population and Sample

The population of the present study consists of all the B.Ed. student teachers of Gujarat Vidyapith studying in academic year 2010-2011. There are total 162 student teachers in two different institutes becomes population of the study. Out of them 64 student teachers of one institute were taken as the sample of the study. The sample selection was made by Incidental sampling.

Method of the Study

Present study was done by survey method.

Research Tool

In the study ready made standardized computer phobia scale was used. This scale was developed and standardized by S.Rajasekar & P.Vaiyapuri Raja (2006,p.108) to measure the level of computer phobia among teachers. This scale consists of 29 items which focus on three dimensions viz: Personal failure-anxiety about present or future interactions with computers and related technology; Human versus Machine Ambiguity- Negative global attitudes about computers, their operations, or their societal impact; and convenience- specific negative sentiments of self critical dialogues design, actual computer interactions or when contemplating future computer interaction. The reliability of the scale found by its developers was 0.94. In the scale each item is set against five point scale of strongly agree, agree, undecided, disagree and strongly disagree. The maximum possible score could be 116 and the minimum could be zero. In present study, convenient point of view the scale translated in to local language by researcher.

PROCEDURE OF DATA COLLECTION:

Researcher himself, the computer phobia scale was administered on 64 student teachers of B.Ed. college of Gujarat Vidyapith. Enough time were given to all respondents, to give their response. Scores of each student teachers were calculated from their responses and done analysis from the obtain data by MS Excel programme.

ANALYSIS OF DATA:

In order to test the null hypothesis data analysis were made throughout computer programme. In statistical analysis independent groups't-test was made in order to test the differences across the various variables. Moreover ANOVA statistical technique was performed to describe the difference between zone wise groups of student teachers.

RESULTS:

In order to determine the level of computer phobia in student teachers, scores were classified according to norms established by empirical research and reported by Rosen and Weil(Ursavas O.F.& H.Karal 2009, p.72) for computer phobia scores such as: No computer phobia:0-41, Low computer phobia: 42-49 and moderate to high computer phobia: 50-100. The three categories of computer phobia and its corresponding no. of student teachers and their percentage are given bellow.

Table -1

Classification of level of computer phobia in student teachers

Computer phobia level	No. of student teachers
(0-41) NO	47 (73.5 %)
(42-49) Low	08 (12.5 %)
(50-100) Moderate/ High	09 (14.0 %)

It is observed from the above table 73.5 % of student teachers report no computer phobia, 12.5% of student teachers have low computer phobia and 14 % of them report moderate and high computer phobia. Therefore most of the student teachers have no computer phobia.

The computer phobia scores of student teachers were calculated and classified according to variable such as gender (male, female) and stream (science, language). Then mean, SD and t-value were calculated and the significance level of mean difference was tested.

Table-2

Gender and stream wise mean, SD CR and the level of significance of the computer phobia scores

Variable	Mean	SD	CR(t-value)	Significance level
Gender: Female	36.83	15.98	2.02	0.05
Male	44.66	14.80		
Stream: Science	45.94	17.84	1.79	NS
Language	38.20	14.60		

It is observed from the Table-2 that mean and SD of female and male student teachers are 36.83, 44.66 and 15.98, 14.80 respectively. Value of CR is 2.02, which is more than the value 1.95. Therefore it can be said that the difference between the mean of female and male student teachers is significant at 0.05 level. Hence the null hypothesis 'There will be no significant gender difference in computer phobia of student teachers' is rejected. Therefore it can be conclude that male student teachers have more computer phobia than female student teachers.

Where as for the second variable – stream viz: science and language the mean and SD are 45.94, 38.20 and 17.84, 14.60 respectively. Value of CR is 1.79 and which is not significant. Hence the null hypothesis 'There will be no significant main stream difference in computer phobia of student teachers' is not rejected. Therefore it can be said that as far as computer phobia concern, both science and language student teachers were almost equal.

In order to compare region wise student teachers' computer phobia, all student teachers were divided with respect to their native district in to four zones (North, South, East, West) across the Gujarat state. Then zone wise student teachers' computer phobia scores were compared, for this ANOVA was applied. The ANOVA statistics are given in Table-3.

Table-3

Result of ANOVA

Source	SS	df	MS	F-value	Significance level
Between group	2640.19	3	880.06	4.02	0.02
Within group	13142.81	60	219.05		0.02
total	15783	63			

The sum of squares between groups and within groups was 2640.19 and 13142.81 respectively. The F-value was found to be 4.02 at 0.02 level of significance. Therefore the null hypothesis 'There will be no significant geographical zone difference in computer phobia of student teachers' is rejected. It indicates that there is a significant difference between the North, South, East, West zone student teachers' computer phobia.

The correlations among subscales of computer phobia scale are measured and its results are given in table-4.

Table - 4
Correlation coefficients between subscales

	Personal Failure	Human Vs machine Ambiguity	convenience
Personal Failure	1		
Human Vs machine Ambiguity	0.56*	1	
convenience	- 0.72*	- 0.51*	1

*Correlation is significant at the 0.01 level.

As it is seen in the table - 4 correlations between subscales of computer phobia are measured significant and having negative correlation at 0.01 level. But the correlations between convenience with personal failure and human Vs machine ambiguity were negative, whereas between Personal Failure and human Vs machine ambiguity was positively correlated. Hence the null hypothesis 'There will be no significant correlation between subscales of computer phobia scale' is rejected. Therefore it can be concluded that there was statistically significant correlations between subscales of computer phobia.

Findings

- Most of student teachers (73.5%) have no computer phobia.
- In respect of Gender, Male student teachers were significantly more computer phobic than Female student teachers.
- In respect to main stream, science and language student teachers were almost equal.
- In respect to region of Gujarat State, there was a significant difference in the East, West, North and South region student teachers computer phobia.
- As a component of computer phobia, convenience with Personal Failure and Human Vs Machine Ambiguity has significant negative correlation. Whereas between Personal Failure and human Vs machine ambiguity has positively correlated.

DISCUSSION:

In present study, statistical data analysis done with the help of percentage, t-test, Analysis of variance and correlation. The result showed that the 73.5% of the student teachers reported no computer phobia, 12.5% and 14.0% of them reported low and moderate to high computer phobia respectively. This is generally consistent with previous study (Ursavas O.S. & H.Karal 2009, p.74).

This study also investigated whether student teacher's computer phobia levels differentiate significantly based on their gender, main stream and region (native district). The t-test was used to test the mean scores differences. The results showed that the mean computer phobia score of female was low as compared to male at 0.05 level of significance. Whereas, difference between science and language student teachers' computer phobia scores were not significant. Thus it can be said that female student teachers have no more fear regarding personal failure. However main subject's streams of student teachers have no impact on their computer phobia.

The mean scores difference among region wise student teachers' computer phobia were compared by F-test. F-value was found 4.02(df1=3, df2=60) and was significant at 0.02 level. So, it was concluded that there was a significant difference in East, West, North and South region's student teachers.

The relationship was measured between subscales of computer phobia scale. The correlations were negative and significant.

SUGGESTIONS:

According to the study many student teachers were not computer phobic and confident to perform better with technology. Faculties in training programmes have to use more and more technology or there is a need to transform technology through regional media and generate resources.

Jay suggests (cited by Michael F.2010, p.4) the cure for computer phobia lies in promoting a change in the attitude and behavior of the phobic. This can be achieved by either of two ways:(1)The individual must instigate a course of personal education on the subject of computers, or (2)An environment must be provided in which the phobic is allowed to develop and change.

Various studies suggests that technological hands-on activities for student

Teachers should be in curriculum of teacher education. Libraries have such types of potentiality. Now a days library also becomes digitalized through latest technology. Kanmani M. and M.Radha (2009, p.50) have recommended that the college library must have computers with multimedia kits and it should be equipped with educational software. Student should be trained to use the technology in constructive way.

Further group interaction should be placed in computer laboratory.

Autonomous learning or learning in an individual mode is unlikely to the core fears of computer phobic.

REFERENCES

1. George A.,Christin E. & Laura D. (2008) Testing for multi group invariance of the computer anxiety scale. *Educational and Psychological Measurement*. Retrieved on 9 Sep.2010 from <http://epm.sagepub.com>
2. Kanmani M. &Radha M. (2009) Effectiveness of CAI Package in Basic Electronics Teaching. *Journal of All India Association for Educational Research* 21,1,47-50,June.
3. Michael F.(2010) Computer Phobia in Adult Learners. Retrieved on 6 August 2010 from <http://citeseerx.ist.psu.edu/viewdoc/download>
4. Rajasekar S. & Vaiyapuri Raja P. (2006) Development and standardization of Computer phobia scale. *Journal of All India Association for Educational Research* 18, 1&2,108-110, March & June
5. Steven H. (1990) Computer phobia: Training managers to reduce the fears and love the machines. Retrieved on 20 August 2010 from <http://wwwappelbaumconsultants.com/articals>
6. Ursavas O.F.& Karal H. (2009) Assessing pre-service teachers' computer phobia in terms of gender and experience. *International Journal of Behavioral, Cognitive, Educational and Psychological Science*. Retrieved on 31 July 2010 from www.waset.org/Journals/ijbceps/v1