

# **COMPUTER ANXIETY AND ACADEMIC ACHIEVEMENT AMONG HIGHER SECONDARY SCHOOL STUDENTS IN TIRUCHIRAPPALLI DISTRICT**

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## **ABSTRACT**

The main objective of the study was to find out the significant relationship between computer anxiety and academic achievement among higher secondary school students in Tiruchirappalli district. The investigator adopted survey method for the study. 240 higher secondary students were selected for the study. Computer anxiety scale prepared by the investigator was used for data collection. Mean, Standard Deviation, t- test, F-ratio, Correlation were the statistical technique used for analysis of data. The findings revealed that there is significant relationship between computer anxiety and academic achievement of the higher secondary students.

## **INTRODUCTION**

Computer technology has a deep impact on education. Computer education forms a part of the school and college curricula, as it is important for every individual today to have the basic knowledge of computers. The advantages of computers in education include an efficient storage and retention of information, quick information processing and saving of paper. Computer teaching plays a key role in modern systems of education. Students find it easier to refer to the internet than searching for information in reference books. The process of learning has gone beyond learning from prescribed textbooks. Today, aspirers can satiate their thirst for knowledge by means of the Internet. It is easier to store information on computers than maintaining hand-written notes.

The use of technology sometimes has unpleasant side effects, which may include strong, negative emotional states that arise not only during interaction but even before, when the idea of having to interact with the computer begins. Frustration, confusion, anger, anxiety, and similar emotional states can affect not only the interaction itself, but also productivity, learning, social relationships, and overall well-being.

## **NEED FOR THE STUDY**

It would be particularly important to establish measures of psychological constructs that impact an individual's use of computers or performance for computer-based tasks. Two such variables are computer self-efficacy and computer anxiety. Anxiety has been argued to affect computer based learning by affecting levels of self-efficacy. 'No man is an Island'. Since the human person is living in the society, he/she has to interact with others. Relationship with others in the society is needed if one has to live his/her life peacefully and successfully. One who has a positive academic self-image of himself / herself can have a better academic achievement and also can reduce various stress of life. If the anxiety of the adolescents regarding technology like computer is healthy and positive, it would help him/her grow positively and assist in adjusting the society in which he/she is a member and shine well in their academic achievement. Hence it is essential to study the relationship that exists between computer anxiety and academic achievement.

## **STATEMENT OF THE PROBLEM**

Computer anxiety and Academic achievement among Higher Secondary students in Tiruchirappalli district.

## **OBJECTIVES OF THE STUDY**

1. To find out significant difference if any between male and female Higher Secondary students with respect to Computer anxiety and Academic achievement.
2. To find out significant difference if any between XI and XII standard students with respect to Computer anxiety and Academic achievement.
3. To find out significant difference if any among higher secondary students with respect to Computer anxiety and academic Achievement based on the type of management.
4. To find out significant difference if any between the higher secondary students with respect to Computer anxiety and Academic achievement based on having personal computer at home.
5. To find out significant relationship if any between Computer anxiety and Academic achievement of higher secondary students.

## **HYPOTHESES OF THE STUDY**

1. There is no significant difference between male and female higher secondary students with respect to Computer anxiety and Academic achievement.
2. There is no significant difference between XI and XII standard Students with respect to Computer Anxiety and Academic Achievement.
3. There is no significant difference among higher secondary students with respect to Computer anxiety and Academic achievement based on the type of management.
4. There is no significant difference between higher secondary students with respect to Computer Anxiety and Academic achievement based on having a personal computer at home.
5. There is no significant relationship between Computer anxiety and Academic achievement of Higher Secondary students.

## TOOL

Computer Anxiety Scale – prepared and validated by the investigator

## STATISTICAL TECHNIQUES USED

In the present study, the following statistical measures were used: Mean, Standard Deviation, t- test, F-ratio, Correlation

## HYPOTHESES TESTING

### Null Hypothesis 1

There is no significant difference between male and female higher secondary students with respect to Computer anxiety and Academic achievement.

**Table 1**

### **SIGNIFICANT DIFFERENCE BETWEEN MALE AND FEMALE HIGHER SECONDARY STUDENTS WITH RESPECT TO COMPUTER ANXIETY**

Variable	Gender	N	Mean	SD	't' - value	Significance
Computer anxiety	Male	120	43.19	8.819	3.374	S*
	Female	120	47.50	10.859		

Level of Significance is 2.58 at 0.01 level.

From the above table we may infer that the calculated value (3.374) is greater than the table value (2.58) at 0.01 level. Hence the hypothesis is rejected and therefore there is significant

difference between male and female higher secondary students with regard to their Computer anxiety.

**Table 2**

**SIGNIFICANT DIFFERENCE BETWEEN MALE AND FEMALE HIGHER SECONDARY STUDENTS WITH RESPECT TO ACADEMIC ACHIEVEMENT**

Variable	Gender	N	Mean	SD	't' - value	Significance
Academic achievement	Male	120	65.10	16.969	3.157	S*
	Female	120	58.18	16.975		

Level of Significance is 2.58 at 0.01 level.

From the above table we may infer that the calculated value (3.157) is greater than the table value (2.58) at 0.01 level. Hence the hypothesis is rejected and therefore there is significant difference between male and female higher secondary students with regard to their Academic achievement.

**Null Hypothesis 2**

There is no significant difference between XI and XII standard students with respect to Computer anxiety and Academic achievement.

**Table 3**

**SIGNIFICANT DIFFERENCE BETWEEN XI AND XII STUDENTS WITH RESPECT TO COMPUTER ANXIETY**

Variable	Standard studying	N	Mean	SD	't' - value	Significance
Computer anxiety	XI	120	44.81	9.927	0.824	NS
	XII	120	45.88	10.292		

Level of significance is 2.58 at 0.01 level.

From the above table we may infer that the calculated value (0.824) is less than the table value (1.96) at 0.05 level. Hence the hypothesis is accepted and therefore there is no significant difference between XI and XII standard students with regard to their Computer anxiety.

**Table 4**

**SIGNIFICANT DIFFERENCE BETWEEN XI AND XII STUDENTS WITH RESPECT TO ACADEMIC ACHIEVEMENT**

Variable	Standard	N	Mean	SD	't' -	Significance
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	studying				value	
Academic Achievement	XI	120	63.39	16.450	1.573	NS
	XII	120	59.89	17.984		

Level of Significance is 2.58 at 0.01 level.

From the above table we may infer that the calculated value (1.573) is less than the table value (1.96) at 0.05 level. Hence the hypothesis is accepted and therefore there is no significant difference between XI and XII standard students with regard to their Academic achievement.

### Null Hypothesis 3

There is no significant difference among higher secondary students with respect to Computer Anxiety and Academic Achievement based on the type of management.

**Table 5**

**SIGNIFICANT DIFFERENCE AMONG HIGHER SECONDARY SCHOOL STUDENTS WITH RESPECT TO COMPUTER ANXIETY BASED ON THE TYPE OF MANAGEMENT**

Variable	Type of management	N	Mean	S.D	't'-value	Significance
Computer anxiety	Govt.	80	47.98	9.340	2.671	0.01
	Aided	80	43.85	10.176		
	Govt.	80	47.98	9.340	2.411	0.05
	Private	80	44.21	10.369		
	Aided	80	43.85	10.176	0.223	NS
	Private	80	44.21	10.369		

Level of significance is 2.58 at 0.01 level.

The above table clearly shows that there exists a significant difference between Government and Aided School and Governments and Private Higher Secondary School students based on their Computer anxiety at 0.01 and 0.05 level. No significance is found among other types of school Management. Hence the null hypothesis is rejected.

**Table 6**

**SIGNIFICANT DIFFERENCE AMONG HIGHER SECONDARY STUDENTS WITH RESPECT TO ACADEMIC ACHIEVEMENT BASED ON THE TYPE OF MANAGEMENT**

Variable	Type of management	N	Mean	S.D	't'-value	Significance
Academic achievement	Govt.	80	49.61	10.236	5.721	0.01
	Aided	80	62.46	17.287		
	Govt.	80	49.61	10.236	11.427	0.01
	Private	80	72.85	15.036		
	Aided	80	62.46	17.287	4.055	0.01
	Private	80	72.85	15.036		

Level of Significance is 2.58 at 0.01 level.

The above table clearly shows that there exists significant difference between Governments and Aided, Government and Private, and Aided and Private management school students with respect to Academic achievement at 0.01 level among Higher Secondary School students based on their Academic achievement. Hence the null hypothesis is rejected.

#### Null Hypothesis 4

There is no significant difference between Higher Secondary students with respect to Computer anxiety and Academic achievement based on having a personal computer at home.

**Table 7**

**SIGNIFICANT DIFFERENCE AMONG HIGHER SECONDARY STUDENTS  
WITH RESPECT TO COMPUTER ANXIETY BASED ON HAVING A PERSONAL  
COMPUTER AT HOME**

Variable	Having personal computer at home	N	Mean	S.D	't'-value	Significance
Computer Anxiety	Yes	202	45.08	10.496	0.925	NS
	No	38	46.74	7.657		

Level of significance is 2.58 at 0.01 level.

From the above table, it is inferred that the t- value (0.925) is less than the table value (1.96) at 0.05 level. Hence the hypothesis is accepted and therefore there is no difference between Higher Secondary students with respect to Computer anxiety based on having a personal computer at home.

**Table 8**  
**SIGNIFICANT DIFFERENCE AMONG HIGHER SECONDARY STUDENTS**  
**WITH RESPECT TO ACADEMIC ACHIEVEMENT BASED ON HAVING A**  
**PERSONAL COMPUTER AT HOME**

Variable	Having personal computer at home	N	Mean	S.D	't'-value	Significance
Academic Achievement	Yes	202	61.53	17.773	0.221	NS
	No	38	62.21	14.629		

Level of significance is 2.58 at 0.01 level.

From the above table, it is inferred that the t- value (0.221) is less than the table value (1.96) at 0.05 levels. Hence the hypothesis is accepted and therefore there is no significance difference between higher secondary students with respect to Academic Achievement based on having personal computer at Home.

Therefore the above hypothesis is accepted.

#### **Null Hypothesis 5**

There is no significant relationship between Computer anxiety and Academic achievement of higher secondary students.

**Table 9**  
**RELATIONSHIP BETWEEN COMPUTER ANXIETY AND ACADEMIC**  
**ACHIEVEMENT OF HIGHER SECONDARY STUDENTS**

VARIABLE	NUMBER	CORRELATION
Computer anxiety Vs Academic achievement	240	0.418

From the above table, it is observed that there is a positive relationship between Computer anxiety and Academic achievement of Higher Secondary Students. Therefore the null hypothesis is rejected.

## MAJOR FINDINGS

1. It is found that there exists significant difference between male and female Higher Secondary students with regard to their Computer anxiety.
2. It is found that there exists significant difference between male and female Higher Secondary students with regard to their Academic achievement.
3. It is found that there exists no significant difference between XI and XII standard students with regard to their Computer anxiety.
4. It is found that there exists no significant difference between XI and XII standard students with regard to their Academic achievement.
5. It is found that there exists significant difference between Government vs. Aided school and Government vs. Private Higher Secondary students based on their Computer anxiety.
6. It is found that there exists significant difference between Government vs. Aided, Government vs. Private, and Aided vs. Private school students in their Academic achievement.
7. It is found that there exists no difference between Higher Secondary students with respect to Computer Anxiety based on having personal computer at Home.
8. It is found that there exists no significance difference between Higher Secondary Students with respect to Academic Achievement based on having personal computer at Home.
9. It is found that there is a positive relationship between Computer anxiety and Academic achievement of Higher Secondary students.

## EDUCATION IMPLICATIONS

Successful use of computers in the classroom is users' acceptance, which in turn might be greatly influenced by users' attitudes. For this reason, students' attitude towards computers has been studied with different samples and instruments by many researchers since the 1980s. Anxiety has been found to be a predictor of the adoption of new technologies such as computers (Anderson et al., 1979).

Lack of computer experience is one of the most obvious reasons for this anxiety. Using a computer and the internet requires a certain amount of practice and perseverance. As one

acquires more and more knowledge of computers along the way, he/she will automatically discover how useful using a computer can be in daily life.

Computer anxiety is anxiety generated around the use of computers , referring to “a state of heightened tension or a feeling of apprehensive expectation”.

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