Computer Attitude among secondary school students of Bangalore City

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Abstract

The present study aims to investigate the computer attitude among secondary school students, a sample comprised of 300 students belonging to secondary schools of Bangalore city, Karnataka during the academic year 2011-2012. Data regarding the Computer Attitude were collected through simple random sampling technique through survey method. The study revealed that Computer Anxiety, Computer Confidence and Computer Attitude were not significant among Genders of secondary school students, computer anxiety very significant among senior and junior secondary school students.

Introduction

The versatility of human ability to reduce a complex problem to a simple logically connected problem and then apply a computer to solve them has made their use widespread. Primarily computers were applied for calculations that were beyond contemplation because of time span and monotony involved in solving them. Today, apart from scientific work computers are applied to a variety of applications. To mention a few of them: space programs, fly-by-wire aircraft system, guided missiles, air craft control, weather predictions, nuclear technology, submarine and space shuttle navigation, library management, online reservations in trains & aircrafts. They are used at homes, in office, at schools, in banks. Think of any field - the computer exists. Today the world revolves around the computer.

Computer Attitude

We live in a postmodern society, where information is considered to be an extremely valuable commodity. Those who control important information, or who simply know how to access and use it, are the key players in the information-based economy. He further argued that, computer literacy and the skills that can be built there from are essential to one’s effectiveness in modern societies, not just in our working lives, but in the way we learn, manage our finances, and improve our standard of living. When it comes to teaching and learning, Computers can be an incredible tool, especially when the learners have access to data stored on CD-ROMs or the Internet. They can use a PC to access vast knowledge bases on almost any topic, search archives of information dating back decades, ask questions online and even take online courses. So it is important to have a basic understanding of computer technology, regardless of one’s career choice or aspiration. Researchers have proposed that positive attitudes toward computers, high computer self-efficacy and lower computer anxiety levels could be important factors in helping people learn computer skills and use computers. Woodrow [1991] claimed that students’ attitudes toward computers were critical issues in computer courses and computer-based curricula. Othman and Nordin [2005] concluded that monitoring the user’s attitudes toward Computers should be a continuous process if the computer is to be used as a teaching and learning tool.

In general, attitudes can be defined as “a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object” [Fishbein and Ajzen, 1988]. They are relatively less stable than personality traits and can be changed both across time and across situations in virtue of individual’s interaction with the environment. Since attitudes are learnt, they are mouldable i.e. they change with experience of the stimulus objects and with social rules or institutions.

According to Woodrow [1991] computer-related attitudes influence students’ desire to use computers, their desire to enroll in computer-related subjects and courses, and their choice of career path. Students’ computer-related attitudes are also directly related to their prior experiences and use of computers.
Attitudes are a personal factor and they are referring to one’s positive or negative judgement about a concrete subject. Attitudes are determined by the analysis of the information regarding the result of an action and by the positive or negative evaluation of these results (Ajzen & Fishbein, 1988). Ajzen (1988) specifies the word ‘attitude’ as an inclination which can be taught and can make people react to a matter either in a positive or negative way. Attitudes can be taught either through imminent experience or by other people. They reflect the way people think of, feel and intend to react under certain circumstances. The development of different human activity sectors and consequently behavior, are effected by computers and information communication technology in general. Past research indicated that computer confidence and computer attitudes pointed out that in the educational context, confidence should lead to more positive attitudes towards computers, and this will enhance learning and associated activities. Woodrow (1991) mentioned that the primary goal behind the implementation of computers in education is the utilisation of them by the students.

Need and Importance of the Study

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Review of Related Literature

Adebowale, Adediwura, Bada (2009) Correlates of Computer Attitude among Secondary School Students , Research have been conducted to study students’ attitude towards the computer [computer attitudes], their computer self efficacy and computer anxiety separately. This study was specifically targeted at determining if socio-demographic variables like gender, age and field of study had any effect on these computer parameters among secondary school students. It also explored the possibility of been able to predict students’ computer characteristics from computer efficacy, computer anxiety and demographic variables. 600 students were selected by proportionate sampling from the Senior Secondary class III [SS III] of six secondary schools equipped with 40 micro-computer-fitted laboratories by the Nigerian [Lagos state] government. The instrument for the study consisted of two types of questionnaires, one titled “Questionnaire on the computer attitude” was used to obtain a measure of students’ computer attitude while another titled “Questionnaire on students computer self efficacy and computer anxiety” was used to measure their computer self efficacy and computer anxiety. The questionnaires were administered by their ICT teachers under the supervision of the researchers. Data analyses were by using t-test, ANOVA, Posthoc tests and multiple regressions. The results showed that gender had no significant influence on any of the three parameters But age seems to affect computer and computer anxiety. Students in The vocational and commercial fields of study Had better attitude towards the computer than those in the sciences and arts.

Evangelos, Panagiotis ( 2009 ) Gender Differences on attitude, computer use and Physical activity among Greek university students, The aim of this study was to discover any possible relation(s) between the subject of computer, the involvement in physical activity examine and the attitudes of
Greek Physical Education students, divided by gender. The sample consisted of 165 freshmen students, 93 males and 72 females. They completed: a) the “Computer Attitude Scale” questionnaire (Selwyn, 1997), and b) the “Planned Behavior Theory” questionnaire (Ajzen & Madden, 1986; Theodorakis, 1994; Theodorakis, et al., 1995). The results indicated gender differences on two factors, “affect” and “perceived usefulness”. No gender differences were indicated on the sample attitudes towards PA.

Methodology

Objectives of the study
The Present study was undertaken with the following objectives:

- To compare the mean scores of Computer Anxiety among Secondary schools Boys and Girls.
- To compare the mean scores of Computer Anxiety among Junior and Senior Secondary school students.
- To compare the mean scores of Computer confidence among Secondary schools Boys and Girls.
- To compare the mean scores of Computer Attitude among Secondary schools Boys and Girls.

Hypotheses

In order to pursue the objectives of the study the following hypotheses were framed:

1) There is no significant difference in the mean scores of Computer Anxiety among Secondary schools Boys and Girls.
2) There is no significant difference in the mean scores of Computer Anxiety among Junior and Senior Secondary school students.
3) There is no significant difference in the mean scores of Computer confidence among Secondary schools Boys and Girls.
4) There is no significant difference in the mean scores of Computer Attitude among Secondary schools Boys and Girls.

Sample and Design of the study

Various techniques have been designed in order to obtain a representative sample. The adequacy of a sample depends upon the knowledge of the population as well as upon the method of sampling. Before the actual collection of data a decision must be made specifically about the group of the people to which the study pertains and that group is termed as research population or target population. As it is not possible to cover the entire target population for the study, the procedure of selecting the research sample was based on representative sample. The research sample is that representative smaller numbers of the research population which can be a statistical image of the population. In the present study, a sample of 300 students belonging to secondary schools of Bangalore city, Karnataka during the academic year 2011-2012. Data regarding the Computer Attitude were collected through simple random sampling technique through survey method.

Tools of Research

The tool used for the present study was Computer Attitude Scale constructed by Dr.Tahira Khatoon and Manika Sharma.

Statistical techniques employed for the study

The separate variance model of t-test was used for testing the hypotheses for the significance of mean difference in the scores of various groups of Secondary school students was compared.
Analysis and Interpretation of the data

Hypothesis 1: There is no significant difference in the mean scores of Computer Anxiety among Secondary schools Boys and Girls.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>t-Value</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Anxiety</td>
<td>Boys</td>
<td>163</td>
<td>14.877</td>
<td>3.077</td>
<td>0.327</td>
<td>@ Not significant at 0.05 level</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>137</td>
<td>14.766</td>
<td>2.790</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table that the obtained t-value 0.327 is lesser than the tabled t-value of 1.97 for the degrees of freedom 298 at 0.05 level of significance. Therefore the null hypothesis is accepted. Hence it is concluded that there is no significant difference in the mean scores of Computer Anxiety among Secondary schools Boys and Girls.

Hypothesis 2: There is no significant difference in the mean scores of Computer Anxiety among Junior and Senior Secondary school students.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>t-Value</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Anxiety</td>
<td>Junior</td>
<td>268</td>
<td>14.963</td>
<td>2.917</td>
<td>2.295</td>
<td>@ 0.05 level</td>
</tr>
<tr>
<td></td>
<td>Senior</td>
<td>32</td>
<td>13.688</td>
<td>2.978</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table shows that the obtained t-value 2.295 is greater than the tabled t-value of 1.97 for the degrees of freedom 298 at 0.05 level of significance. Therefore the null hypothesis is rejected and alternative hypothesis is accepted. Hence it is concluded that there is a significant difference in the mean scores of Computer Anxiety among Junior and Senior Secondary school students. It is seen that the mean scores of Junior (14.963) is higher than mean scores of senior (13.688) in their level of computer anxiety.

Hypothesis 3: There is no significant difference in the mean scores of Computer confidence among Secondary schools Boys and Girls.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>t-Value</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer confidence</td>
<td>Boys</td>
<td>163</td>
<td>15.540</td>
<td>2.534</td>
<td>1.171</td>
<td>@ Not significant at 0.05 level</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>137</td>
<td>15.175</td>
<td>2.807</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table shows that the obtained t-value 1.171 is lesser than the tabled t-value of 1.97 for the degrees of freedom 298 at 0.05 level of significance. Therefore the null hypothesis is accepted. Hence it is concluded that there is no significant difference in the mean scores of Computer confidence among Secondary schools Boys and Girls.

Hypothesis 4: There is no significant difference in the mean scores of Computer Attitude among Secondary schools Boys and Girls.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>t-Value</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Attitude</td>
<td>Boys</td>
<td>163</td>
<td>79.552</td>
<td>8.793</td>
<td>1.567</td>
<td>@ Not significant at 0.05 level</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>137</td>
<td>77.993</td>
<td>8.406</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table shows that the obtained t-value 1.567 is lesser than the tabled t-value of 1.97 for the degrees of freedom 298 at 0.05 level of significance. Therefore the null hypothesis is accepted. Hence it is
concluded that there is no significant difference in the mean scores of Computer Anxiety among Secondary schools Boys and Girls.

**Major Findings of the study**

- There is no significant difference in the mean scores of Computer Anxiety among Secondary schools Boys and Girls.
- There is a significant difference in the mean scores of Computer Anxiety among Junior and Senior Secondary school students. It is seen that the mean scores of Junior (14.963) is higher than mean scores of senior (13.688) in their level of computer anxiety.
- That there is no significant difference in the mean scores of Computer confidence among Secondary schools Boys and Girls.
- There is no significant difference in the mean scores of Computer Anxiety among Secondary schools Boys and Girls.

**Educational Implications**

- The study revealed that there is no significant difference in the mean scores of Computer Anxiety among Secondary schools Boys and Girls. The Anxiety level are same for both the boys and girls, many of the students engage themselves more towards the exam related subjects and spend their time towards co-curricular activities this must have left the impact on the students towards the level of computer anxiety. Since it is the 21st century, students should devote more time towards attainment of computer literacy.
- The study showed that there is a significant difference in the mean scores of Computer Anxiety among Junior and Senior Secondary school students. It is seen that the mean scores of Junior (14.963) is higher than mean scores of senior (13.688) in their level of computer anxiety. The Computer Anxiety level is more in junior secondary school students because of less exposure toward the computer, senior students have devoted their time towards handling and using computer from their early years. The junior students should take advice; clarify doubts and problems regarding handling the computers from seniors as well as from the teachers.
- The study showed that there is no significant difference in the mean scores of Computer confidence among Secondary schools Boys and Girls. This is due to the less time devoted towards the usage of computer. Though computer subjects are introduced in the school, the students should practice the same at the home, if not they tend to forget and confidence level will decrease in handling the computer.
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**References**