ABSTRACT

The study investigated “Effectiveness of E-Learning modules on creativity and achievement in computer science of Higher Secondary School Students”. The objective of the study is to find out the effectiveness of E-Learning among the Higher Secondary School Students.

This study investigates the effectiveness of using E-Learning in teaching in tertiary institutions. In institutions of higher education, the issue of utilizing modern information and communication technologies for teaching and learning is very important. This study reviews literature and gives a scholarly background to the study by reviewing some contributions made by various researchers and institutions on the concept of E-Learning, particularly its usage in teaching and learning in higher educational institutions. It unveils some views that people and institutions have shared globally on the adoption and integration of E-Learning technologies in education through surveys and other observations. This paper tells us about what is E-learning, what is its impact on employee and student performance, what is its history, difference between E-learning and traditional learning, future of E-Learning and some facts about E-Learning that are collected from various websites of Internet are also included in this paper, fact show that it is growing in recent years.

A sample of 40 students from 2 higher secondary schools were selected in Trichy district for this research work using the random sampling techniques. The investigator collected the reviews that are conducted in India and in abroad.

The tool for “Effectiveness of E-Learning” was prepared by the investigator under the two categories “creativity” and “achievement”. Each item consists of 25 questions. The research findings show that the level of effectiveness of E-Learning among the Higher Secondary School Students was high when compared with conventional talk and chalk method.

KEYWORDS: Effectiveness, Creativity, Achievement, Technology in Education, E-Learning, Conventional method.

INTRODUCTION:

The destiny of country is decided in classrooms. Quality of education in schools to great extend depends on ability and motivation and involvement of the teachers, infrastructure and effective school administration.

Education and society are related to each other, both are interdependent. Therefore sociologists refer school as a “miniature society”. In other words school is a representative of a society. Education is important and useful to every section of the society. Education has come a long way since early days though it encompasses a lot more than what was there to be taught in earlier times, and technology has made it easier for both the teachers and students to learn easily. The advances in technology are not limited to gadgets and appliances used by people in daily life, it has reached schools and classrooms to ease the way education is imparted and absorbed by students. The Internet has become one of the vital ways to make available resources for research and learning for both teachers and students to share and acquire information

Need of the Study:

In the present digital era, the development in various aspects of computer technology has reached beyond our imagination and expectations. Even though computer has lot of applications in various field, one should not forget its application in the field of education. It is very useful and helpful in teaching and learning process. They have capability of multiplying the human intellect beyond part concepts and have tremendous implications for education. E-Learning plays an important role in making education really interesting.

In this 21st century, there is a fast changing in the classroom interaction. Due to internet, a new direction is shown to the education field. Keeping these things in mind, the investigator of the present study would like to frame a study on the effectiveness of E-Learning modules in teaching learning progress.

Scope of the Study:

The main scope is finding the effectiveness of E-Learning in computer science among higher secondary school students. The investigator hopes that the findings of this will provide certain concrete suggestions to the students about E-Learning. It is also concerned with the quality of education.

Objectives:

1. To find out the significant difference between the mean scores of Experimental group which is exposed to the developed E-Learning modules and control group which is taught through the conventional talk & chalk method for XI standard students in their pre test for creativity in computer science.
2. To find out the significant difference between the mean scores of Experimental group which is exposed to the developed E-Learning modules and control group which is taught through the conventional talk & chalk method for XI standard students in their pre test for achievement in computer science.
3. To find out the significant difference between the mean scores of Experimental group which is exposed to the developed E-Learning modules and control group which is taught through the conventional talk & chalk method for XI standard students in their post test for creativity in computer science.
4. To find out the significant difference between the mean scores of Experimental group which is exposed to the developed E-Learning modules and control group which is taught through the conventional talk & chalk method for XI standard students in their post test for achievement in computer science.
5. To find out significiation correlation between the post-test scores in creativity and achievement which are exposed to the developed E-Learning modules.

Hypotheses:

1. There is no significant difference between the mean scores of Experimental group which is exposed to the developed E-Learning modules and control group which is taught through the conventional talk & chalk method for XI standard students in their pre test for creativity in computer science.
2. There is no significant difference between the mean scores of Experimental group which is exposed to the developed E-Learning modules and control group which is taught through the conventional talk & chalk method for XI standard students in their pre test for achievement in computer science.
3. There is no significant difference between the mean scores of Experimental group which is exposed to the developed E-Learning modules and control group which is taught through the conventional talk & chalk method for XI standard students in their post test for creativity in computer science.
4. There is no significant difference between the mean scores of Experimental group which is exposed to the developed E-Learning modules and control group which is taught through the conventional talk & chalk method for XI standard students in their post test for achievement in computer science.
group which is taught through the conventional talk & chalk method for XI standard students in their post test for achievement in computer science.

5. There is no significant correlation between the post-test scores in creativity and achievement which are exposed to the developed E-learning modules.

Sample:
According to GOODE & HAT (1952) "A sample is smaller representation of the larger whole". In the present study 40 higher secondary school students have been selected as sample.

Statistical Techniques Used:
Suitable statistical techniques were used in the interpretation of the data to test various hypotheses such as mean, Pooled Standard deviation, t-values and correlation analysis.

Limitations of the Study:
- The study is limited to Trichy district only.
- Limited variables were assumed for this investigation.
- Sample size confined to 40 higher secondary school students.

RESULT AND DISCUSSION:
Table 1
The mean, S.D., ‘r’ value of Experimental group which is exposed to the developed E-Learning modules and control group which is taught through the conventional talk & chalk method for XI standard students for creativity and achievement in computer science.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>r Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creativity</td>
<td>Pre-test Experimental Group</td>
<td>20</td>
<td>10.15</td>
<td>1.78</td>
<td>0.08*</td>
</tr>
<tr>
<td></td>
<td>Pre-test Control Group</td>
<td>20</td>
<td>9.2</td>
<td>1.64</td>
<td>3.82</td>
</tr>
<tr>
<td></td>
<td>Post-test Experimental Group</td>
<td>20</td>
<td>21.25</td>
<td>1.87</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post-test Control Group</td>
<td>20</td>
<td>15.75</td>
<td>1.40</td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>Pre-test Experimental Group</td>
<td>20</td>
<td>10.05</td>
<td>1.90</td>
<td>0.09*</td>
</tr>
<tr>
<td></td>
<td>Pre-test Control Group</td>
<td>20</td>
<td>9.05</td>
<td>1.73</td>
<td>3.67</td>
</tr>
<tr>
<td></td>
<td>Post-test Experimental Group</td>
<td>20</td>
<td>20.9</td>
<td>1.97</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post-test Control Group</td>
<td>20</td>
<td>16.2</td>
<td>1.39</td>
<td></td>
</tr>
</tbody>
</table>

*Not significant at 0.05 level.

The Mean, SD, t-values of creativity and achievement were tabulated in table 1. The pre test scores of creativity and achievement are not significant. Hence the null hypotheses framed on these variables are accepted. The post test scores of creativity and achievement are significant. Hence the null hypotheses framed on these variables are not accepted.

Table 2
The relationship between Creativity and Achievement

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>r</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creativity</td>
<td>20</td>
<td>0.418</td>
<td>0.26</td>
</tr>
<tr>
<td>Achievement</td>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Significant at 0.05 level

The calculated value of ‘r’ 0.418 is more than the table value of ‘p’ 0.26 at 0.05 level of significance. Since the ‘r’ value is moderate, it is concluded that there is a moderate relationship between the post-test scores in creativity and achievement which are exposed to the developed E-learning modules.

CONCLUSION:
An attempt has been made find out the effectiveness of E-Learning modules on creativity and achievement in computer science of higher secondary school students and it was found to be overall effective than the conventional talk and chalk method.

- The pre test scores of creativity and achievement are not significant.
- The post test scores of creativity and achievement are significant.
- There is a moderate relationship between the post-test scores in creativity and achievement which are exposed to the developed E-learning modules.

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