The Impact of Multimedia on Environmental Education Teaching at B.Ed., Level

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ABSTRACT
The impact of multimedia on Environmental Education Teaching at B.Ed., level is evaluated in this study. It has been found that video has positive impact on teaching the students at B.Ed level in the various dimensions of learning EE such as Knowledge, Understanding and expression. It has also been found that there are positive correlation between study habit and academic achievement in EE and between attitude towards the study of EE and academic achievement in EE. Various recommendation have been given at the end of the thesis based on the findings of the study.

KEYWORDS: Multimedia, EE-Environmental Education, Components


INTRODUCTION
Whenever the word teaching is mentioned, the method that comes to the minds of the people is 'Lecture'. Lecture as means of communication between the teacher and the taught is extensively used for transmitting knowledge. This is true from school to college levels. The principal role of educational technology is to help in

- Increasing the quality of learning
- Decreasing the time taken for learners to achieve desired goals.
- Increasing the capacity of teachers in terms of number of learners taught, without reducing the quality of learning.
- Reducing costs, without affecting quality.

MEDIA USED IN INDIVIDUALIZED LEARNING.
- Textual materials
- Audio visual materials
- Video Assisted Instruction materials
- Media used in mass instruction
- Auto Instructional Techniques
- Video Assisted Instruction

THE ROLE OF EE
Environmental Education is a life –long process

- EE is unfolding process of knowledge
- EE is based on child's psychology
- EE is individual as well as social
- EE is a process of total development
- EE is an instrument of social change and social control
- EE is an art as were as science

IMPORATANCE OF EE
- Conservation of resources
- Sustainable development of an individual
- Knowledge aim, cultural development aim, vocational aim, and harmonious development aim.
- Interaction between person and the environment.
- Encouraging and involving workers and scholars in other disciplines to contribute to EE.
- Study of EE all levels, professional as well as liberal, in other countries of the world.
- Provide sanitary facilities in school.
- Keeping school, college home and surroundings clean.

NEED FOR THE STUDY:
- EE and training at school, college and University level.
- Environmental engineering which includes the study to assess the impact of engineering science on environment.
- To understand some basic facts about environment
- To suggest long lasting and successful solution to environmental problems.
- To creating of new technology and literature relevant ourselves and our needs.
- The efficiency of the plants to convert solar energy or light energy into chemical energy or food energy which is used by green plants to build up their tissues.
- To interpret the world life of terms on natural process.
To evolve scientific approaches for controlling and regulating the welfare of living organisms.
To study the relation between living organism and non living organism of environment

SCOPE OF THE STUDY:
To make the citizens environmentally literate.
To make proper decisions to protect the environment.
To develop appropriate skills in the citizens to identify environmental problems and their causes.
The develop eco friendly technology to tackle them the benefit of all to become capable of evaluating alternative solutions to environmental issues.
To understand the effects of using the environment is multiple ways.

OBJECTIVES:
To develop multimedia programme for EE on a selected topic at B.Ed level.
To compare the impact of Video Assisted instruction with traditional method with reference to the achievement of B.Ed students in EE.
To find out whether there is any significant difference between the mean score of the EE Achievement at knowledge level, level of the control group and the experiment group in the post test level.
To find out whether there is any significant difference between the mean scores of the EE Achievement in understanding level of the control group and the experimental group in the post level.

HYPOTHESIS:
There is no significant difference between the control group and the experimental group in achievement in EE at the pre – test level.
There is significant difference between the control group and the experimental group in achievement in EE at the post – test level.
There is significant difference between the mean scores of the control group and the experimental group in the post – test in EE achievement at knowledge level.
There is significant difference between the mean scores of the control group and the experimental group in the post – test in achievement of EE at understanding level.

METHODOLOGY:
Experimental method is used for this study. Achievement scores as demonstrated in the change in EE score overall, as well as being displayed in knowledge level ‘understanding level’ and ‘Expression level’.

INDEPENDENT VARIABLES:
EC of Instruction study habit and Attitude towards the study of EE.

SAMPLE

<table>
<thead>
<tr>
<th>GROUP</th>
<th>Tamil Medium</th>
<th>English Medium</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>Experimental</td>
<td>30</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>TOTAL</td>
<td>60</td>
<td>60</td>
<td>120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GROUP</th>
<th>Number</th>
<th>Mean</th>
<th>SD</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>18.44</td>
<td>0.74</td>
<td>1.66</td>
<td>NS</td>
</tr>
<tr>
<td>Experimental</td>
<td>30</td>
<td>18.04</td>
<td>1.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

STATISTICAL TOOLS
‘Pre test’ and ‘post test’ materials prepared and validated by the investigator
‘t’ test to analyse the differential hypothesis

ANALYSIS AND INTERPRETATION
Achievement scores in EE at pre – test level

Table 2 ‘t’ Test for Mean scores of the Experimental Group and Control Group

<table>
<thead>
<tr>
<th>GROUP</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>19.05</td>
<td>0.86</td>
<td>6.09</td>
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<tr>
<td>Experimental</td>
<td>30</td>
<td>25.77</td>
<td>0.69</td>
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</table>

Critical value for 0.05 level = 1.98
NS = Not Significant

The calculated ‘t’ value is very much less than the critical value 1.98 corresponding to the 0.05 level of significance. Therefore, it is concluded that the experimental group and control group did not differ significantly in pre-test level.

Table – 3 Achievement scores in EE at post-test level ‘t’ test for Mean scores of the experiment Group and control Group

<table>
<thead>
<tr>
<th>GROUP</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>18.41</td>
<td>0.87</td>
<td>37.12</td>
<td>S</td>
</tr>
<tr>
<td>Experimental</td>
<td>30</td>
<td>25.61</td>
<td>0.66</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Critical value for 0.01 levels 2.61
S-Significant

The calculated ‘t’ value 37.12 is greater than the critical value 2.61 corresponding. It is concluded the experimental group and the control group differ significantly in the post – test level.

Table – 4 Achievement scores in EE at knowledge level ‘t’ test showing post-test scores of the Experimental Group and the control group

<table>
<thead>
<tr>
<th>GROUP</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>20.28</td>
<td>0.57</td>
<td>33.47</td>
<td>S</td>
</tr>
<tr>
<td>Experimental</td>
<td>30</td>
<td>25.61</td>
<td>0.66</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Critical value for 0.01 levels 2.61
S-Significant

The calculated ‘t’ value 33.47 is greater than the critical value 2.62 corresponding to the 0.01 level of significance is significant. It is concluded that the experimental Group and the control group differ significantly in EE at knowledge level.

Table 5 Achievement scores in EE at understanding level. ‘t’ test showing post-test scores of the Experimental Group and the control Group

<table>
<thead>
<tr>
<th>GROUP</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>T</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>20.28</td>
<td>0.57</td>
<td>33.47</td>
<td>S</td>
</tr>
<tr>
<td>Experimental</td>
<td>30</td>
<td>25.61</td>
<td>0.66</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Critical value for 0.01 level = 2.61
S-Significant
The calculated ‘t’ value 33.47 is greater than the critical value 2.61 corresponding to the 0.01 level of significance is significant. It is concluded that the experimental group and the control group differ significantly in EE at understanding level.

CONCLUSION:
The analysis revealed that Video of an Instructional package is a better method of training compared to conventional method. It is concluded that the multimedia has the positive impact on teaching EE at B.Ed level on the various dimensions such as knowledge, understanding and impression. The teachers may be given training in developing multimedia programmes suited to their task.

REFERENCES: