Application of Concept Achievement Model in Classroom Teaching as a Challenge of Educational Technology

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Abstract:
Good and fruitful teaching is possible only if the concepts of logic thought related estimation and grammar are clear in students’ mind. After deep thinking about this point, the investigator decided to carry out this study to investigate whether Concept Achievement Model of teaching has any effect on students’ academic achievement. Here the researcher wants to find out the effect of Lecture method and Concept Achievement Model on academic achievement of students.

Keywords: Application, Concept Achievement Model, Challenges, Education Technology

1. Introduction
The aim of education is all round development of student. He studies different subjects like mathematics, English and Gujarati etc. In all these subjects teaching of Gujarati as our mother tongue and teaching through that mother tongue is very important because mother tongue is the foundation of all subjects. Moreover, child’s intellectual, social and emotional development and education becomes possible only through his or her mother tongue.

There are different teaching models which are widely used in the field of education. These teaching models are based on one or the other psychological principle. Not only that, but also it has specific planning and progressive steps and it has specific rules. It also decides field of education for students. In short, teaching models are student centered and they can be repeated as they are. For different objectives there are different teaching models.

2. Objectives of the Study
1. To construct a Concept Achievement Model on the unit of ‘Types of Adjectives’ in Gujarati subject.
2. To investigate the effectiveness of Lecture method and Concept Achievement Model on academic achievement of students.

3. Hypotheses of the Study
Ho₁ There will be no significant difference between mean scores of the post test of the students of the experimental group and the controlled group of rural area.
Ho₂ There will be no significant difference between mean scores of the post test of the students of the experimental group and the controlled group of urban area.
4. Variables of the Study

<table>
<thead>
<tr>
<th>No.</th>
<th>Types of Variables</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Independent variable</td>
<td>Teaching method</td>
</tr>
<tr>
<td>2.</td>
<td>Dependent variable</td>
<td>Academic achievement</td>
</tr>
</tbody>
</table>
| 3.  | Controlled variable | Environment of school, Time of learning  
|     |                   | Number of periods, Standard of teaching |
| 4.  | Intervening variable | - Novelty of teaching method  
|     |                   | - Interaction between groups  
|     |                   | - Interpersonal differences like intelligence, Attitude, Personality |
| 5.  | Moderator variable | Area - Rural, Urban |

5. Population and Sample of the Study
In the present study the population was the students studying in standard 7th of Gujarati medium schools of Dahod district during the year of 2011-12.

Keeping this population in mind for better and faultless administration of the experiment one rural and one urban school of Dahod district were selected through Purposive Sampling method. The Classes - A of rural and urban schools were taken as the experimental group and classes of the same rural and urban schools were taken as the controlled group.

6. Tool used for this Study
In the present study the topic of ‘Types of Adjectives’ was taught through concept achievement model and the traditional method. It was a self made tool.

7. Method of Data Analysis
The data obtained from the sample can be analyzed through different statistical methods. Here the investigator used t- Test.

8. Data Analysis on the Basis of Hypotheses Testing

H0: There will be no significant difference between mean scores of the post test of the students of the experimental group and the controlled group of rural area.

For testing this null hypothesis t-test formula was used for analysis. Its details are shown in table 1.

Table 1
Scores in the Post test of the Students of Rural area

<table>
<thead>
<tr>
<th>Group</th>
<th>No. of Students</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>t value</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>30</td>
<td>19.3</td>
<td>3.39</td>
<td>0.915</td>
<td>2.71</td>
<td>0.01</td>
</tr>
<tr>
<td>Controlled</td>
<td>30</td>
<td>16.73</td>
<td>3.92</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In the table 1 it can be seen that the mean of the scores of the students of experimental group of rural area in the post test is 19.3, while the mean of the scores of the students of controlled group is 16.73. The t value of the difference between the means of the two groups is 2.71 which is higher than 1.96 at 0.05 level and 2.58 at 0.01 level, so it is significant at both 0.05 and at 0.01 levels. The null hypothesis is rejected.

**H02:** There will be no significant difference between mean scores of the post test of the students of the experimental group and the controlled group of urban area.

For testing this null hypothesis t- test formula was used for analysis. Its details are shown in table 1.

**Table 2**

<table>
<thead>
<tr>
<th>Group</th>
<th>No. of Students</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>t value</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>30</td>
<td>19.83</td>
<td>3.33</td>
<td>0.97</td>
<td>2.78</td>
<td>0.01</td>
</tr>
<tr>
<td>Controlled</td>
<td>30</td>
<td>17.13</td>
<td>4.14</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the table 2 it can be seen that the mean of the scores of the students of experimental group of urban area in the post test is 19.83, while the mean of the scores of the students of controlled group is 17.13. The t value of the difference between the means of the two groups is 2.78 which is higher than 2.58, so it is significant at 0.01 level. The null hypothesis is rejected.

**9. Findings**

There is significant difference between the mean scores of the students of the experimental group and the controlled group of rural area in the post test. The mean of the experimental group is higher.

So it can be said that Concept Achievement Model is more effective than the traditional method.

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**References**