Chapter-1

Statement of Problem and Operational Definition of Words
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1.0 Introduction

The aim of the education is the overall and all-round development of the students. To fulfill this aim, formal and informal instruction has been provided in the school. The students have been taught different subjects at the school level like mathematics, science, English, Gujarati etc. With the reference to all these subjects, the education of Gujarati language and education through mother tongue has been considered the most important determinant because the mother tongue is the base for all the subjects. Moreover, the instruction of mother tongue determines cognitive, social, mental and emotional development of the students.

Since last few years, ignorance and neglect of communicators, teachers and students towards the Gujarati language has become current problem of the time. They give more importance to other subjects than Gujarati language. There are number of reasons behind it. We have witnessed many changes in the educational system with the development in science and technology. Thus, it is natural that subject teaching has been imparted with the help of many technological instruments. However, Gujarati language teacher does not seem to undertake such an exercise. There are many books and educational journals available in which methods and techniques of Gujarati language teaching has been given. Yet there are least authentic material in which the methods and techniques have been described with efficient illustrations and examples. It creates confusion in the mindset of teachers and students. The application of innovative methods and techniques has not been seen in the teaching of mother tongue.

Use and application of teaching model can be seen in the education of present era. Each and every teaching model attributes psychological principle background. Teaching model also holds certain planning, sequential steps and proper rules. It also decides and clarifies the functions of the students. Overall, the teaching models are totally students centered and so they are revisable. There are many teaching models available for different aims and objectives.

With the reference to Gujarati language education, if reasoning, though provocation and grammatical points have been clarified, it becomes useful to then students. The researcher had decided, after continues speculation and reflection, to
study the effectiveness of concept attainment model for grammar teaching of Gujarati language education at secondary education.

1.1 Statement of the Problem

The problem of the present research has been titled as under.

**Effectiveness of concept attainment model with reference to**

**Educational Achievement in the subject of**

**Gujarati of standard nine**

1.2 Definition and Operational Definition of Key Words Included in Study

According to Whiteny (1954)

“To define a problem means to put a face around it to separate it by careful distinction from like question found in related situation of needs.”

In the present research, the definition of key words included in the study has been given as under.

**Academic Achievement**

Academic achievement means the marks or score achieved in evaluation or test.

**Operational Definition**

The score or marks achieved in post-test taken after teaching the students by concept attainment model method and traditional method of teaching based on types of adverb of Gujarati language subject of 9th standard.

**Concept Attainment Model**

According to Dr. D. N. Ansatawal and Dr. Prabhakar Sinh (1991)

“From many models of educational models, the concept attainment model (CAM) has been included based on the principles of Jeromy Bruner. It is used for the education of
concept in the educational field. It is the model in which the student gains the concepts of different terms. The students get the concept by the analysis of positive and negative illustrations by hypothesis of the terms.”

Bruner, Godunov and Austin (1967) had given the principles based on their study of thinking process of humans. They had asserted that the concepts can be taught by applying these principles in the education. This principle is known as concept attainment model in education.

**Operational Definition**

It is such a strategy for the teaching of concepts in which the students develop inductive reasoning and achieves pre-decided objectives having thought positive and negative attributes of examples.

**Effectiveness**

It is the significant difference between pre-experience and post-experience of the students executed by certain method.

**Operational Definition**

Effectiveness is direct or indirect response on problem done as an activity to solve certain problem.

Effect means emergence of result oriented work.

### 1.3 Objectives of Study

Objective is such a central point in which direction the work has been undertaken or the objective is such a change which can be achieved by action

The objective determines the direction of any research. The objectives of present research were as under.

1. To construct the concept attainment programme on selected types of adverb of Gujarati language subject for the students of 9th standard.

2. To compare the effectiveness of traditional lecture method and concept attainment model method on academic achievement of the students.
3. To compare the effectiveness of traditional lecture method and concept attainment model method on academic achievement of the students with the reference to area.

4. To compare the effectiveness of traditional lecture method and concept attainment model method on academic achievement of the students with the reference to gender.

5. To study the effectiveness of application of concept attainment model on retention of the students

1.4 Variable of Study

Variable is that which varies. In other words the variable is that which varies from person to person or variant between person to person. Variable is the unit of characteristics which can be given values. Variable is the unit of the characteristic which can be changed, shaped or modified. Variable of the study has been given here.

Independence Variable

Independence variable is the unit of the characteristic or a situation which is used to observe the relation of it on the observed incidents. It means that it is the variable which is used to bring the change or modification in another variable. The researcher changes the independence as according to change in observed variable.

In the present research, the independence variable of the study was teaching methods. There were two levels of the variable. These were:

1. Teaching with Concept Attainment Model
2. Teaching with Traditional Method

Dependant Variable

Dependant variable is the unit of the characteristic which is dependent on independent variable. The effect of dependant variable changes as according to change in the dependant variable. In other words, the dependant variable is changed, shaped and modified according to the change and modification in the independent variable. It is also arisen, changed and removed with effect of independent variable.
In the present research, the academic achievement of the student was the dependent variable.

**Controlled Variable**

Controlled variable is the variable which can affect the dependent variable. The researcher controls it to measure the effect of the independent. The researcher controls the controlled variable to make it effectless or neutral.

The controlled variables of the present study were school, unit of teaching, time, standard and teacher.

**Intervening Variable**

Some variables create the imaginative effect on the dependent variable. The effect of which cannot be seen, observed, measured or calculated. The effect can only be imagined or assumed. These variables are called intervening variable.

In the present study, innovations in the teaching method, interaction between the groups, individual differences like intelligence, attitude and personality of the students are the intervening variable.

**Moderator Variable**

This variable is also called sub-independent variable which is used to study the effect between the relationship of independent variable and dependent variable.

Moderator variable is the factor which is selected, measured and controlled by the researcher to observe and study whether it affects, changes or modifies the relationship between the independent variable and dependent variable or not.

In the present research, area (rural and urban area) and gender (male and female) are the moderator variables.

The variable of the study has been given below.
<table>
<thead>
<tr>
<th>No.</th>
<th>Variable</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Independent Variable</td>
<td>Teaching Method</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Concept Attainment Model</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Traditional Method</td>
</tr>
<tr>
<td>2</td>
<td>Dependent Variable</td>
<td>Academic Achievement</td>
</tr>
<tr>
<td>3</td>
<td>Controlled Variable</td>
<td>School Climate, Time of School, Number of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Period, Standard of Study</td>
</tr>
<tr>
<td>4</td>
<td>Intervening Variable</td>
<td>Innovation of Teaching Method</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Interaction between the Groups</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inter-student differences like intelligence,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>attitude, personality</td>
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<tr>
<td>5</td>
<td>Moderator Variable</td>
<td>Area - Urban and Rural</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gender- Male and Female</td>
</tr>
</tbody>
</table>

1.5 **Hypotheses of Study**

The researcher had constructed following hypotheses with the reference to the present research.

**Ho₁.** There will be no significant difference between the mean score of experimental group and controlled group of rural area on post-test.

**Ho₂.** There will be no significant difference between the mean score of male and female students of experimental group of rural area on post-test.

**Ho₃.** There will be no significant difference between the mean score of experimental group and controlled group of rural area on retention test.

**Ho₄.** There will be no significant difference between the mean score of male and female students of experimental group of rural area on retention test.
Ho$_5$. There will be no significant difference between the mean score of students of experimental group of rural area on post-test and retention test.

Ho$_6$. There will be no significant difference between the mean score of experimental group and controlled group of urban area on post-test.

Ho$_7$. There will be no significant difference between the mean score of male and female students of experimental group of urban area on post-test.

Ho$_8$. There will be no significant difference between the mean score of experimental group and controlled group of urban area on retention test.

Ho$_9$. There will be no significant difference between the mean score of male and female students of experimental group of urban area on retention test.

Ho$_{10}$. There will be no significant difference between the mean score of students of experimental group of urban area on post-test and retention test.

Ho$_{11}$. There will be no significant difference between the mean score of students of urban area and rural area of experimental group on post-test.

Ho$_{12}$. There will be no significant difference between the mean score of students of urban area and rural area of experimental group on retention test.

1.6 **Rationale of Study**

The rationale of the study is as under.

1. The difference between the effectiveness of concept attainment model and traditional method of teaching could be studied with the reference to the academic achievement of the students.

2. The effect of concept attainment model on academic achievement of the students with the reference to gender and area of domicile can be studied by the present study.

3. The reasoning ability of the students can be developed by the concept attainment model programme.
4. The students can get clear understanding about certain concepts with the help of concept attainment model.

5. The interest of the students in specific teaching method can be known and studied by the present research.

6. The understanding of how the concepts can be learnt would be developed by the concept attainment model programme.

7. The present study was useful for the teachers to overcome their limitations with the reference to day to day teaching.

8. Healthy interaction between the students and teacher can be possible which foster curiosity and awareness in the students. The emotional climate which would magnify the mother tongue teaching successful.

9. The present research will help the students to understand the concepts of the terms. Thus the meaningful learning rather than rote learning.

10. Concept attainment model provides the certain sequence and steps to concept learning. So, it will become helpful to both the teacher and the taught in the mother tongue.

1.7 **Limitations and Delimitations of Study**

Before pursuing any research, the limitations and delimitations of the study should be studied. John Best asserts emphasizing the importance of the limitations of the research,

“This recognition helps to focus attention and valid objectives and helps to minimize the dangers of over generalization”\(^5\). The limitations and delimitations of the present study have been as under.

1. In the present research, the concept attainment model has been constructed for the students of 9\(^{th}\) students with the reference to Gujarati language only.

2. The present study was delimited to the selected rural and urban schools of Mehsana district.

3. The present study was delimited to selected concepts.
4. In the present study, the researcher had used intelligent test constructed and validated by Dr. H. J. Shah for deviation of intelligent.

5. The present study was delimited to the students of Gujarati medium schools only. The researcher had not included the students of other medium schools.

6. The post-test was constructed by the researcher and necessary improvements and rectifications were made by the researcher according to the recommendations by the experts.

7. This research has been delimited to the students of grant-in-aid schools only.

1.8 Planning of Upcoming Chapters

Planning is the most important factor before initiating any intentional work. So, it is necessary to pursue the research work methodically, scientifically and with appropriate planning. In the present research, the researcher has given the gist of the planning of upcoming chapters briefly. The planning of the upcoming chapters has been mentioned as under.

Chapter-2 Review of Related Literature

In the present chapter, the review of related literature has been mentioned. After specifying the introduction phase, the researcher has presented the review of theoretical literature, precede researches. The researcher has also analyzed the similarities and differences between the researches done in the past. After reviewing the precede researches, the researcher had mentioned the scope of the present research. The rationality of the present research has also been discussed in the chapter.

Chapter-3 Research Design

In the present chapter, the research design has been discussed in detail. The researcher has given detailed description about the origin of the research, population and sample, sampling process, research field, type of research, research method, planning of the experiment, selection and construction of the research tool, variable of
the research and their recognition, method of data collection, technique of data analysis and validity of the experiment.

Chapter-4 Data Analysis and Interpretation

In the present chapter, the data collected by the concept attainment model has been organized, analyzed and interpreted. The detail of statistical techniques used in the research has been presented with the tabular form. The interpretation of the data has also been given by the researcher. The finding and result of the present research has been compared and discussed with past researches by the researcher.

Chapter-5 Abstract, Finding and Recommendation for Future research

In the present research, abstract of the research in which introduction, title, checking of the objectives, checking of hypotheses, findings of the research, educational implications of the research and recommendations for the future researches has been given.
Reference


