CHAPTER – 7

RESEARCH SUMMARY,
INFERENCES AND
RECOMMENDATIONS
“Research Summary inferences, suggestions and recommendations for future researches.”

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RESEARCH SUMMARY, INFERENCES AND RECOMMENDATIONS

7.1 Introduction

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7.1 Introduction:-

This chapter is considered as the heart of thesis. Research process is an aim oriented and scientific process. A research work includes various stages of a process, but the ultimate aim of a research process is the findings which are drawn from it. Other steps are the tools to achieve the aim. In this perspective this chapter has its own distinct importance. This chapter deals with summary of the whole research process and it attempts to provide inferences and recommendation for future researches. This chapter summarizes the whole process beginning from problem selection to the research inferences.

This chapter can be useful in knowing the outcome of a research process. Moreover, it provides knowledge about what is the educational value of a research process. Thus, this chapter discusses about research summary, inferences, suggestion and recommendation for future researches.

7.2 Research Summary:-

This study aims to study reasoning ability of students of std.10. The following is the brief presentation of the whole research work keeping in mind the things or techniques used in it.
• **Title and problem Statement:**

The following is the title/problem statement of this study.

“A study of reasoning ability of std.10 students of Ahmedabad district and guidance for their stream selection.”

• **Objectives:**

The following are the objectives of the study:

1. To study the reasoning ability of students of std.10 studying in secondary schools.
2. To study the level of intelligence of the students of std.10 studying in secondary schools.
3. To study about effects of various levels of intelligence on reasoning ability of students of std.10 of secondary schools.
4. To study reasoning ability of students of std.10 in terms of Gender.
5. To study reasoning ability of students of std.10 terms of Area.
6. To provide guidance to students of std.10 of secondary schools in terms and their testing.

Keeping mind the research objectives the following hypotheses were formulated by the investigator and various statistical techniques were used to test their significance which can be seen in the following tables 7.1
<table>
<thead>
<tr>
<th>Sr. No. of the Hypothesis</th>
<th>Hypothesis</th>
<th>Critical Ratio</th>
<th>Level of Significance</th>
<th>Rejected/ Not Rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₀₁</td>
<td>There is no significant effect of interaction among intelligence level, gender and area in the mean scores obtained on reasoning ability test by students of std.10.</td>
<td>.138</td>
<td>NS</td>
<td>Not Rejected</td>
</tr>
<tr>
<td>H₀₂</td>
<td>There is no significant effect of interaction between genders and area on mean scores obtained on reasoning ability test by students of std.10.</td>
<td>.958</td>
<td>NS</td>
<td>Not Rejected</td>
</tr>
<tr>
<td>H₀₃</td>
<td>There is no significant difference between the mean scores obtained on reasoning ability test by boys and girls of std.10.</td>
<td>3.26</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td>H₀₄</td>
<td>There is no significant difference between mean scores obtained on reasoning ability test by students of rural and urban area.</td>
<td>6.65</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td>H₀₅</td>
<td>There is no significant difference between mean scores obtained on reasoning ability test by boys and girls of std.10 of rural area.</td>
<td>1.24</td>
<td>NS</td>
<td>Not Rejected</td>
</tr>
<tr>
<td>H₀₆</td>
<td>There is no significant difference between mean scores obtained on reasoning ability test by boys and girls of std.10 of urban area.</td>
<td>3.63</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td></td>
<td>Hypothesis</td>
<td>Description</td>
<td>t-value</td>
<td>p-value</td>
</tr>
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<td>---</td>
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</tr>
<tr>
<td><strong>H_07</strong></td>
<td>There is no significant difference between mean scores obtained on reasoning ability test by boys of std.10 of urban and rural area.</td>
<td>3.38</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H_08</strong></td>
<td>There is no significant difference between mean scores obtained on reasoning ability test by the girls of std.10 or rural and urban areas.</td>
<td>6.38</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H_09</strong></td>
<td>There is no significant difference between mean scores obtained on reasoning ability test by students of std.10 having high and low level of achievement.</td>
<td>19.46</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H_10</strong></td>
<td>There is no significant difference between mean scores obtained on reasoning ability test by boys and girls of std.10 having high level of intelligence.</td>
<td>1.23</td>
<td>NS</td>
<td>Not Rejected</td>
</tr>
<tr>
<td><strong>H_11</strong></td>
<td>There is no significant difference between mean scores obtained on reasoning ability test by boys and girls of std.10 having low level of intelligence.</td>
<td>2.50</td>
<td>0.05</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H_12</strong></td>
<td>There is no significant difference between mean scores obtained on reasoning ability test by the students of std.10 of rural area having high and low level of achievement.</td>
<td>12.05</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
</tbody>
</table>
• **Variables under the Study:-**

This study includes gender, area and intelligence level as independent variables and reasoning ability as dependent variables.

• **Population:-**

This study included the students of std.10 of Gujarati Medium Secondary Schools of Ahmedabad district studying the academic year of 2014-15 as the population of the study.

• **Sample Selection:-**

Among the schools of Ahmedabad district, 6 schools of Ahmedabad city and 6 schools of rural area of Ahmedabad district were selected by the convenience non-random sampling method as the sample of the study.

• **Research Tool:-**

This study aimed to know about reasoning abilities of students, therefore the following tools were used:

(1) **For measurement of reasoning ability:**

Verbal reasoning ability test developed and standardized by Dr.Harshaben R. Patel

| \( H_{13} \) | There is no significant difference between mean scores obtained on reasoning ability test by students of std.10 or urban area having high and low level of intelligence. | 12.52 | 0.01 | Rejected |
(2) **For measurement of Intelligence:**

Verbal, Non-verbal group intelligence test developed and standardized by Dr. K.G. Desai.

(3) **Self Test:**

Verbal reasoning ability test was developed and standardized the research scholar.

- **Data Analysis and Interpretation:**

On the basis of classification of data in terms of variables under the study of critical ratio quartile deviation and percentages were used to test the mean, standard deviation and null hypothesis and f-value was used to find out interaction. The computations in the study were done with the help of Microsoft Excel Program of computer.

### 7.3 Findings of Research:

The following were the inferences based on the data obtained by analysis.

1. Reasoning ability was not affected by interaction of intelligence level, gender and area.
2. Reasoning ability was not affected by interaction of gender and area.
3. Students in the whole sample had medium level of reasoning ability.
4. The girls were found more superior than the boys in terms of reasoning ability.
5. Students of rural area have more reasoning ability than the students of urban area.
6. Boys and girls of rural area had similar reasoning ability.
7. Girls of urban area have more reasoning ability than boys of urban area.
8. Boys or urban area have more reasoning ability than boys of rural area.
(9) Girls of urban area have more reasoning ability than girls of rural area.
(10) Reasoning ability of boys and girls is similar for high intelligence level.
(11) Reasoning ability of girls is more than boys for low intelligence level.

7.4 Guidance about Stream Selection:

The students were given guidance on the basis of their reasoning abilities and levels of intelligence about which stream should be selected for study. The following are its details:

- Students should not imitate senselessly, keeping in mind their reasoning ability and level of intelligence they should select an appropriate stream from among arts, commerce and science stream so that they can get better success in future.
- Teachers and parents should keep in mind the abilities, skills of their words and provide than guidance for selection of suitable stream.
- Students having low reasoning ability or low level of intelligence should select arts stream so that they can study nicely and achieve a better success.
- Student having medium level of reasoning ability or medium level of intelligence should select commerce stream so that they can study nicely and achieve a better success.
- Students with high reasoning ability or high level of intelligence should select science stream so that they can study nicely and achieve a better success.
- Moreover, students with high reasoning ability or intelligence level can select engineering, medicine etc. fields for their studies.
Thus, keeping in mind the reasoning abilities and intelligence level of students, guidance was provided for stream selection.

7.5 **Suggestions:**

- **Suggestions related to teachers:**

  (1) Attempts should be made to enhance reasoning ability among students.
  
  (2) Attempts should be made to enhance intelligence among students.
  
  (3) Students should be given various activities.
  
  (4) Various activities, competitions and programs should be organized in class room, school and society for overall development of students.
  
  (5) Students should be given appropriate guidance to use their abilities without the fear of failure.
  
  (6) Various co-curricular activities should be organized to remove dislike towards study.
  
  (7) By knowing their different problems educational vocational guidance can be organized and should be helpful in their future career.
  
  (8) To indentify abilities and limitations of students and should be made known to the students.
  
  (9) Teachers should give tasks to students according to their abilities.
  
  (10) Programs like workshop, sports, tour, recreation etc. should be organized for students.
• **Suggestion related to parents/guardians:-**

(1) Parents should have full faith/confidence of their children. They should be given freedom for their progress and should show interest in their works.

(2) Attempts should be made to understand and solve problems of students.

(3) Parents should always maintain contacts with teachers and principal.

(4) Parents should encourage students to enhance their thinking and reasoning abilities.

(5) Parents should allow their children to choose the stream of their choice without any pressure.

• **Suggestion related to Students:-**

(1) Students should make preparations for exams regularly according to the timetable.

(2) Students should show positive attitudes towards all.

(3) Students should encourage themselves for doing those things for which they are unable.

(4) Students should pay attention with interest in classroom teaching.

(5) Students should solve difficulties related to content with the help of the teacher so that the false beliefs in their minds can be removed.

(6) Students should read books related to general knowledge and reasoning.

(7) Students should always try to enhance their intelligence and reasoning ability.
7.6 **Recommendations for future researchers:**

No research is ever complete. This study was conducted by keeping in mind certain limitations. The findings of this study will be useful to students, teachers, parents and other stakeholders in the field of education. There are opportunities for future researches. In this study the investigator had faced difficulties on certain points which can make suggestions for future researches. These suggestion are not complete in all respect, however they can show new direction to future researches. Following researches can be conducted for proposed problems:

- A study can be conducted about comparison of reasoning abilities of students of std.10 of schools with medium of instruction as the language other than Gujarati language.
- A study can be conducted on reasoning abilities and stream-guidance for the students of cities other than the city of Ahmedabad.
- A study can be conducted about reasoning ability of primary school students.
- This type of study can be conducted on secondary school students.
- This type of study can be conducted on college students.
- An individual study on students having high reasoning ability.
- A comparative study on reasoning abilities of the students of std.10 in Gujarati and English medium schools of Ahmedabad city.
- A study of reasoning abilities of students in terms of their educational achievement.
- A comparative study of reasoning abilities of students in terms of educational achievement, reasoning ability and intelligence.
• A comparative study of reasoning abilities of students of higher secondary schools in terms of their educational achievements, reasoning ability and intelligence.

• A comparative study of reasoning abilities of students of secondary schools in terms of their educational achievement, reasoning ability and intelligence.

• A comparative study of reasoning abilities of primary school students in terms of their educational achievement, reasoning ability and intelligence.

7.7 Conclusion:-

Every research work provides a new direction for future research and shows limitations of the completed work. Many issues related to experiences and difficulties faced during a research work come up before a researcher. Through these issues are important in view of future researches a researcher has no time to rectify these issues. However they are noted with a purpose to give benefit to other researchers. Keeping this in mind, the present study is a humble attempt in terms of reasoning ability of students of std10 of secondary schools of Ahmedabad district. This study is confined to secondary school students of std.10 of Ahmedabad city therefore its outcome cannot be applied to the whole population. However, this study will be useful to teachers, parents and students to know about reasoning ability of students, and thus the study will be considered as a significant humble attempt of the researcher. It is a small attempt by the researcher, any error in it should be considered forgivable.