CHAPTER-1

STATEMENT OF THE PROBLEM & DEFINITION OF THE TERMS

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1.1 INTRODUCTION

God has blessed human beings with intelligence to make them superior among other creatures. Intelligence is overall thinking capacity or mental efficiency of an individual; an ability to carry on abstract thinking. It is general mental adaptability to solve problems of new situation of life. It is the capacity to reorganize ones behaviour patterns so as to act more effectively and more appropriately in novel situations. Education has always been important but perhaps, never more so, in man’s history than today. In science based world, education and research are crucial to the development process of a country, its welfare progress and security. Educationists in India have now realized the importance of consideration of child’s interest, aptitudes, personality traits and abilities in its developmental stages while planning the educational programs for the child. The most important variable that affects schooling or performance on a job is intelligence. If the masses are to be educated the educationists have to recognize the importance of individual differences. The genius, the normal, the intelligent and the dull can not be treated in the same way. A well trained psychologist can differentiate among the children very easily with the help of scientifically developed instruments and help the teacher in doing his best.

The concept of Multiple Intelligence has recently become a popular area in education. Researchers and educators are deeply concerned about the type and levels of knowledge children are acquiring in schools.

Somebody has well said, “The School is a factory of factories where human resources are moulded for the good of society.”

Education has a direct bearing on the society and there is no other place where we can produce good citizens for a good society. For building up better society based on democratic principles, we must turn to schools and make them better than what they are today only better schools can make better society. Secondary Education begins to expose students to the differentiated roles of
science, the humanities and social sciences. This is also an appropriate stage to provide children with a sense to history and national perspective and give them opportunities to understand their constitutional duties and rights as citizens. Access to secondary education will be widened to cover areas unserved by it at present. The aim of secondary education is to train the youth of the country to be good citizens, who will be competent to play their part effectively on the social reconstruction and economic development of the country. This aim has been the preparation of good citizens: Well- informal, Skilled, Imbued with human values and living a democratic way of life with a scientific outlook., and due to recognition of multiple Intelligence we get better person at better place, and at the level where a person should have.

1.2 STATEMENT OF THE PROBLEM

The investigator has decided to construct and standardize a suitable tool to assess the Multiple Intelligence. The title of the present study is,

Construction and Standardization of a Multiple Intelligence Inventory for the Students of Secondary Schools

1.3 DEFINITION OF THE KEY WORDS

In order to avoid misunderstanding, it is necessary to define the key words of the problem, so investigator has defined the key words of the problem below:

- Construction

The Merriam-Webster’s online Dictionary (2011), gives the meaning as,

"The arrangement and connection of words or groups of words in a sentence: syntactical arrangement"

According to Terry & Thomas (1977) construction means,

"Programmed instruction term for the construction of an answer either in writing or by performance actively, not by passive choice"
The term construction indicates the process or act of preparing of a new item or a thing. All the items to be used in the process of standardizing must be constructed.

- **Standardization**

  According to R. S. Patel (2011),

  "Tests are subjected to stages of standardization and are therefore known as standardized tests."

  L. J., Cronbach (1984) defined it as,

  "A standardized test is one which the procedure, apparatus and scoring have been fixed. So that precisely the same test can be given at different times and places"

  According to A. Anastasi & S. Urbina (2002)

  "Standardization implies uniformity of procedure in administering and scoring the test"

  In the above definitions, a psychological test was described as standardized measures. Therefore, it is a process of establishment of fixed procedure of administrating and scoring a test and the establishment of the norms, reliability and validity of a test. Thus, it is a process of refining a measuring instrument through scientific procedures. When a measuring instrument passes through the procedure of standardization, it becomes a standardized instrument.

- **Multiple Intelligence**

  Multiple Intelligence means eight different ways to demonstrate intellectual ability.

  Howard Gardner believes that every person has Intelligence in multiple forms and this intelligence can be developed, strengthened and weakened.
• **Inventory**

Good⁶ (1973) defined inventory as,

“In the field of evaluation, a test or checklist used to determine the subject’s or examinee’s ability, achievement, aptitude, interest or likes, generally in a limited area.”

According to Terry & Thomas⁷ (1977),

“General term for personality tests or questionnaires designed to expose personality characteristics.”

According to Merriam-Webster’s online Dictionary⁸ (2011),

“A list of traits, preferences, attitudes, interests or abilities used to evaluate personal characteristics or skills.”

In the present study the inventory means the list of the statements Related with Multiple Intelligence, to the designed to assess the Student’s Multiple Intelligence.

• **Multiple Intelligence Inventory**

In the present study an inventory prepared by the investigator to assess the student’s Multiple Intelligence is known as Multiple Intelligence Inventory.

• **Secondary school**

Schools permitted to provide secondary education. (Secondary is from Standard 9th to Standard 10th)

1.4 **OBJECTIVES OF THE STUDY**

This study is concerning with the following objectives:

1. To construct an Inventory to measure Multiple Intelligence of the Secondary School Students of Gujarat.

2. To standardize Multiple Intelligence Inventory on the Secondary School Students of Gujarat.
3. To study whether there exist Gender (Boys and Girls) difference with reference to Multiple Intelligence.

4. To study whether there exist Area (Rural and Urban) difference with reference to Multiple Intelligence.

5. To study whether there exist Medium (English and Other) difference with reference to Multiple Intelligence.

6. To prepare a Manual of directions for the future use of an inventory.

1.5 VARIABLES OF THE STUDY

The demographic variables in the study are:

1. **Dependent Variables**: Scores of Multiple Intelligence Inventory

2. **Independent Variables**: 

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<table>
<thead>
<tr>
<th>Area</th>
<th>Gender</th>
<th>Medium</th>
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<tbody>
<tr>
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<td>Girls</td>
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<tr>
<td></td>
<td>English</td>
<td>Other</td>
</tr>
</tbody>
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3. **Controlled Variables**: English and Other Medium Schools of Gujarat State

1.6 HYPOTHESIS OF THE STUDY

Hypotheses are eyes of research problems.

According to Best & Kahn (1989),

"The hypothesis focuses the investigation on a definite target and determines what observation or measures are to be used."

Kerlinger (1983) defined hypothesis as below,

"A hypothesis is a conjectural statement of the relation between two or more variables."
After stipulating the objectives as well as the title of the research study the researcher proposes the solutions of the problem of his research on an adhoc basis in terms of statements which are called hypotheses. These hypotheses are to be tested or verified from the evidences available in the form of collected data. In the present study the researcher had prepared the Multiple Intelligence Inventory, The hypotheses to be tested through this tool. Hypothesis in the present study are as follows:

\( H_0_1 \) There will be no significant difference in the mean score of Multiple Intelligences of boys and girls students

\( H_0_2 \) There will be no significant difference in the mean scores on the Verbal/Linguistic Intelligence of boys and girls students

\( H_0_3 \) There will be no significant difference in the mean scores on the Logical/ Mathematical Intelligence of boys and girls students

\( H_0_4 \) There will be no significant difference in the mean scores on the Musical Intelligence of boys and girls students

\( H_0_5 \) There will be no significant difference in the mean scores on the Visual/Spatial Intelligence of boys and girls students

\( H_0_6 \) There will be no significant difference in the mean scores on the Bodily/Kinesthetic Intelligence of boys and girls students

\( H_0_7 \) There will be no significant difference in the mean scores on the Interpersonal Intelligence of boys and girls students

\( H_0_8 \) There will be no significant difference in the mean scores on the Intrapersonal Intelligence of boys and girls students

\( H_0_9 \) There will be no significant difference in the mean scores on the Naturalist Intelligence of boys and girls students

\( H_0_{10} \) There will be no significant difference in the mean score of Multiple Intelligences of Rural and Urban students
$H_{011}$ There will be no significant difference in the mean scores on the Verbal/Linguistic Intelligence of Rural and Urban students

$H_{012}$ There will be no significant difference in the mean scores on the Logical/Mathematical Intelligence of Rural and Urban students

$H_{013}$ There will be no significant difference in the mean scores on the Musical Intelligence of Rural and Urban students

$H_{014}$ There will be no significant difference in the mean scores on the Visual/Spatial Intelligence of Rural and Urban students

$H_{015}$ There will be no significant difference in the mean scores on the Bodily/Kinesthetic Intelligence of Rural and Urban students

$H_{016}$ There will be no significant difference in the mean scores on the Interpersonal Intelligence of Rural and Urban students

$H_{017}$ There will be no significant difference in the mean scores on the Intrapersonal Intelligence of Rural and Urban students

$H_{018}$ There will be no significant difference in the mean scores on the Naturalist Intelligence of Rural and Urban students

$H_{019}$ There will be no significant difference in the mean score of Multiple Intelligences of English and Other Medium students

$H_{020}$ There will be no significant difference in the mean scores on the Verbal/Linguistic Intelligence of English and Other Medium students

$H_{021}$ There will be no significant difference in the mean scores on the Logical/Mathematical Intelligence of English and Other Medium students

$H_{022}$ There will be no significant difference in the mean scores on the Musical Intelligence of English and Other Medium students

$H_{023}$ There will be no significant difference in the mean scores on the Visual/Spatial Intelligence of English and Other Medium students
Ho24 There will be no significant difference in the mean scores on the Bodily/Kinesthetic Intelligence of English and Other Medium students

Ho25 There will be no significant difference in the mean scores on the Interpersonal Intelligence of English and Other Medium students

Ho26 There will be no significant difference in the mean scores on the Intrapersonal Intelligence of English and Other Medium students

Ho27 There will be no significant difference in the mean scores on the Naturalist Intelligence of English and Other Medium students

1.7 DELIMITATIONS OF THE STUDY

The universe is too wide to study for focusing on pin-point; one has to make the study limited.

According to Best & Kahn\(^{11}\) (1989),

"Limitations are those conditions beyond the control of the researcher that may place restriction on the conclusion of the study and their applications to other situations."

Sukhia & Mehrotra\(^{12}\) (1966) states that,

"A recognition of the limitations of the study helps to focus attention of valid objectives and helps minimize the danger of over generalization."

Delimitations of the study are as following:

1. This study is delimited to the Secondary Schools of Gujarat State only.

2. In the present study among rural, semi-urban and urban areas only urban and rural areas are included.

3. In the present study, as students of other medium of secondary schools, included only Hindi medium and Gujarati medium students.
1.8 IMPORTANCE OF THE STUDY

In this scientific era no country can afford to ignore the best possible use of human potentialities of citizens for the development of the nation. Of all the abilities the field of intelligence testing has been most widely explored. Since 1983 when Howard Gardner coined the term “Multiple Intelligence” it has become one of the more prominent constructs in cognitive and educational psychology. Since then it has triggered impressive amount of research in this field. The variety of areas and perspectives through which Multiple Intelligence is being studied is due to the fact that Multiple Intelligence is inextricably woven with awareness of mental states and with consciousness. In humans, it is at the roots of everyday memory and scientific thinking, as well as of social interactions that require awareness of one’s and others’ thinking. Although, impressive amount of researches have been done in the field still there is a need for further research to establish its relation with other variables such as achievement scores, Interest, motivation, stress, anxiety, age, sex, and area. The psychological tests help in making decisions about the placement of individuals for school and work, in the facilitation in the learning, in the process of counseling, in improving instructions in education, in formulating educational and social policies. To do research in the field of Multiple Intelligence, one of the most difficult problems facing researchers and practitioners is identifying Multiple Intelligence aware learners quickly and reliably. There are many techniques to assess the Multiple Intelligence and each of them has their own advantages and disadvantages. To use a self-report questionnaire or scale is the least problematic technique to assess Multiple Intelligence for the country like India, because it is useful to assess students’ Multiple Intelligence in mass. They are also useful for classification of children with reference to their abilities. Now it is important to measure total intelligence of secondary school students, they are growing generation of the
country. It will help teachers to guide students to choose their career also. It helps teacher students to solve their adolescents' period problems. Therefore must needed mental testing, it causes to the development of an individual as well as whole, for the progress of the country. In India Multiple Intelligence is in its infant stage, in Gujarat state only few researchers have started doing research in this field. Furthermore, till today I have not come across any standardized tool available to assess the multiple Intelligence in Indian context. So that in this context this study to prepare a standardized tool is very significant.

1.9 SCHEME OF THE CHAPTERIZATION

The chapters have been sequenced to be able to move logically towards the conclusions of the study. The remaining chapters have been divided as follows:

Chapter 2 : Theoretical Background and Reviews of Related Literature

There has been a theoretical framework on the subject of Multiple Intelligence which needs to be introduced. This chapter attempts to bring out this theory in a crisp and clear manner, citing along its way the various references used.

A researcher relies heavily on past studies and their findings. This chapter provides valuable reference to the past studies.

Chapter 3 : Research Design

This chapter leads to, Sampling, Research Method and Method of Data Analysis.

Chapter 4 : Construction of Multiple Intelligence Inventory

In chapter-4, we will discuss about pre-pilot testing, pilot testing, Final testing and deep information about construction of Multiple Intelligence Inventory.
Chapter 5 : Data Analysis and Interpretation

In this chapter the various statistical analyses, analysis of the data to test the hypotheses with reference to various variables like area, gender and medium and its findings will be discussed.

Chapter 6 : Reliability, Validity and Norms

The concepts and types of the reliability and validity, different methods by which the reliability and validity of the Multiple Intelligence Inventory will be established and discussed in detail in this chapter. Establishment of the norms will also cover in this chapter.

Chapter 7 : Summary, Findings and Suggestions

In this chapter, a brief summary of the work done, uses of the study, the various findings and recommendations will sum up. A discussion will be presented, considering the findings of previous studies in this area.

1.10 CONCLUSION

In present chapter, we had discussed, about the Introduction of the research subject, statement of the problem, Definition of the key words which is used in the statement of the problem, Objectives of the study, variables of the study, Hypothes of the study, Limitations of the study, Importance of the study and the scheme of the next chapters. In next chapter, we have to discuss about Theoretical background and reviews of related literature.
REFERENCES


