CHAPTER I
INTRODUCTION AND STATEMENT OF THE PROBLEM

1.1 Introduction

The journey of human development is full of changes from the ancient age to the age of Internet. It is because of the education is the process, which changes came over very fast in the all kind of sphere of life. The spread of education is increased day by day throughout the world and it is very necessary at every stage of our life. The development of human being is due to education. Thus, education is a basic tool to achieve the expected goal. Stressing the importance of education Dr. Gunavant says, “Life is always full of motion. Development and restructure is a nature of man’s life. According to the principles of evolution, in place of stability change and regeneration is the only fact of the universe. And education is one of the factors of this regeneration. “

Thus, keeping in mind the demand of the future, it is necessary to bring a change in education by removing the errors and making it target oriented and productive. Education is a life –long process going on during man’s life. Today’s education is child centered. Education gives children opportunities to develop their creative ability and to reach to the depth of it. Different syllabuses of schools have stimulated the cleverness and intelligence of the students. This intelligence of the students helps them to develop their thinking ability and logical ability.

Every child has an innate capacity and logical ability. This curiosity or eagerness should be reinforced by the parents, teachers and the members of the society otherwise its logical ability would not be developed. To avoid it, proper motivation, guidance and opportunities should be given to it.

A person can be expert in one or more than one matters very easily. Aptitude is a hidden strength of a person. And this strength is not yet developed. But it can be developed through proper training. If a person gets proper training in proper field, he will go ahead. So it is our duty to provide them all the equipment which develops their logical ability. That is how the bad elements like violence, aggressiveness and escapism from the children and they can be diverted to a constructive path and enjoy life. Thus, all these things are centered round the logical aptitude of the child. Today, in the present era of globalization through education, it is very much necessary to identify the basic creativity inherent in the child and to nourish it. The responsibility to identify it is of a teacher. He has to discover such students who remain at the front-
position in all the fields of life. And the researcher strictly believes that this work can very well be done by teacher at the school level. So, the researcher would honestly attempt to prepare an Aptitude (logical) Test for the students of commerce and management faculty.

Review of earlier researches makes the subject explicit. It provides us the base of technical facility to carry out our research. The Researcher will use the following aptitude tests as the reference for her research. Intelligence-verbal ability, arithmetic and mathematic aptitude, space ability, scientific aptitude, mechanical aptitude, hand-skills, physical cleverness, art aptitude, social aptitude, clerical aptitude, administration aptitude, practical aptitude, medical aptitude test, law aptitude test, engineering aptitude test, music aptitude test, drawing aptitude test, clerical ability test, verbal –logic test, arithmetic, knowledge of space, mechanical logic, etc. will be studied. K.G. Desai and H.G. Desai have rightly stated that:” There is large scale of use of Intelligence Test to know the abilities of the students. In the present culture Intelligence test are used for the various professions. But it is not always true, because in the many professions, there is need to space ability, writing skill, speed of using fingers, mechanical abilities with intelligence. So there is need to use Ability Test”

Mr. K.G. Desai has conducted above tests on the students of 8th to 11th Std., standardizes and published them. Mr. P. A. Trivedi has conducted mechanical aptitude test on the students of 8th to 11th as well as on the students of mechanical branch of the engineering college and standardizes it. Urvashi ben Desai of Ahmedabad has conducted Gujarati language aptitude test on the students of 8th to 11th Std., standardizes and published them. Mr. R. P. Shah of Ahmedabad has conducted arithmetic aptitude test on the students of 8th to 11th Std., standardizes and published. K.G. Desai and H.G. Desai. Stated that: “There is a need to prepare a well-planned norms and standardization of DAT in the India.”

1.2 Title of the Topic:

Construction and Standardization of Clerical Aptitude Test (CAT) for the undergraduate commerce and management

1.3 Objectives of the Study:

1. To construct, standardize and to check reliability and validity of Clerical Aptitude Test (CAT) for the undergraduate commerce and management.
2. To compare and check the level of Clerical Aptitude of the undergraduate students of commerce and management with reference to Gender.

3. To compare and check the level of Clerical Aptitude of the undergraduate students of commerce and management with reference to Habitat.

4. To compare and check the level of Clerical Aptitude of the undergraduate students of commerce and management with reference to Caste.

5. To compare and check the level of Clerical Aptitude of the undergraduate students of commerce and management with reference to Education Stream.

1.4 Definition of the unfamiliar words:

In the proposed study the definition of the following words will be as under:

- **North Gujarat**: Out of 26 districts of Gujarat, the area of the covering the districts, which are located at the north namely Sabarkantha, Mehsana, Banaskantha and Patan, are known as North Gujarat.

- **Aptitude (logic)**: Logical ability is a kind of Aptitude. A child solves his/her problems with the help of its understanding, knowledge, skill, etc. This ability to solve the problems is known as the logical ability.

- **Structure of Test**: A test which is prepared to measure the special strength, keeping in mind the various aspects of Aptitude like Co-relation, Analysis, Puzzle-solving, relation of blood, Fill the series, etc. is known as the Test.

- **Standardization**: Standardization Test is a test in which the selection of content is made on the basis of well-known standards and for its administration and examination certain methods are developed.

1.5 Variables of Research:

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1.6 Hypotheses:
Following hypotheses are framed for the proposed research:

**Ho1.** There will be no significant difference between mean score of rural habitat male and female undergraduate students with commerce stream on Clerical Aptitude Test.

**Ho2.** There will be no significant difference between mean score of rural habitat male and female undergraduate students with BBA stream on Clerical Aptitude Test.

**Ho3.** There will be no significant difference between mean score of rural habitat male and female undergraduate students with BCA stream on Clerical Aptitude Test.

**Ho4.** There will be no significant difference between mean score of urban habitat male and female undergraduate students with commerce stream on Clerical Aptitude Test.

**Ho5.** There will be no significant difference between mean score of urban habitat male and female undergraduate students with BBA stream on Clerical Aptitude Test.

**Ho6.** There will be no significant difference between mean score of urban habitat male and female undergraduate students with BCA stream on Clerical Aptitude Test.

**Ho7.** There will be no significant difference between mean score of total sample of male and female undergraduate students with commerce stream on Clerical Aptitude Test.

**Ho8.** There will be no significant difference between mean score of total sample of male and female undergraduate students with BBA stream on Clerical Aptitude Test.

**Ho9.** There will be no significant difference between mean score of total sample of male and female undergraduate students with BCA stream on Clerical Aptitude Test.

**Ho10.** There will be no significant difference between mean score of total sample of rural habitat male and female undergraduate students on Clerical Aptitude Test.
Ho11. There will be no significant difference between mean score of total sample of urban habitat male and female undergraduate students on Clerical Aptitude Test.

Ho12. There will be no significant difference between mean score of total sample of male and female undergraduate students on Clerical Aptitude Test.

Ho13. There will be no significant difference between mean score of urban and rural habitat male undergraduate students with commerce stream on Clerical Aptitude Test.

Ho14. There will be no significant difference between mean score of urban and rural habitat male undergraduate students with BBA stream on Clerical Aptitude Test.

Ho15. There will be no significant difference between mean score of urban and rural habitat male undergraduate students with BCA stream on Clerical Aptitude Test.

Ho16. There will be no significant difference between mean score of urban and rural habitat female undergraduate students with commerce stream on Clerical Aptitude Test.

Ho17. There will be no significant difference between mean score of urban and rural habitat female undergraduate students with BBA stream on Clerical Aptitude Test.

Ho18. There will be no significant difference between mean score of urban and rural habitat female undergraduate students with BCA stream on Clerical Aptitude Test.

Ho19. There will be no significant difference between mean score of urban and rural habitat total sample of undergraduate students with commerce stream on Clerical Aptitude Test.

Ho20. There will be no significant difference between mean score of urban and rural habitat total sample of undergraduate students with BBA stream on Clerical Aptitude Test.

Ho21. There will be no significant difference between mean score of urban and rural habitat total sample of undergraduate students with BCA stream on Clerical Aptitude Test.
Ho22. There will be no significant difference between mean score of total sample of urban and rural habitat male undergraduate students on Clerical Aptitude Test.

Ho23. There will be no significant difference between mean score of total sample of urban and rural habitat female undergraduate students on Clerical Aptitude Test.

Ho24. There will be no significant difference between mean score of total sample of urban and rural habitat undergraduate students on Clerical Aptitude Test.

Ho25. There will be no significant difference between mean score of commerce and BBA undergraduate male students on Clerical Aptitude Test.

Ho26. There will be no significant difference between mean score of commerce and BCA undergraduate male students on Clerical Aptitude Test.

Ho27. There will be no significant difference between mean score of BBA and BCA undergraduate male students on Clerical Aptitude Test.

Ho28. There will be no significant difference between mean score of commerce and BBA undergraduate female students on Clerical Aptitude Test.

Ho29. There will be no significant difference between mean score of commerce and BCA undergraduate female students on Clerical Aptitude Test.

Ho30. There will be no significant difference between mean score of BBA and BCA undergraduate female students on Clerical Aptitude Test.

Ho31. There will be no significant difference between mean score of commerce and BBA undergraduate rural habitat students on Clerical Aptitude Test.

Ho32. There will be no significant difference between mean score of commerce and BCA undergraduate rural habitat students on Clerical Aptitude Test.

Ho33. There will be no significant difference between mean score of BBA and BCA undergraduate rural habitat students on Clerical Aptitude Test.
Ho34. There will be no significant difference between mean score of commerce and BBA undergraduate urban habitat students on Clerical Aptitude Test.

Ho35. There will be no significant difference between mean score of commerce and BCA undergraduate urban habitat students on Clerical Aptitude Test.

Ho36. There will be no significant difference between mean score of BBA and BCA undergraduate urban habitat students on Clerical Aptitude Test.

Ho37. There will be no significant difference between mean score of commerce and BBA undergraduate rural habitat male students on Clerical Aptitude Test.

Ho38. There will be no significant difference between mean score of commerce and BCA undergraduate rural habitat male students on Clerical Aptitude Test.

Ho39. There will be no significant difference between mean score of BBA and BCA undergraduate rural habitat students male on Clerical Aptitude Test.

Ho40. There will be no significant difference between mean score of commerce and BBA undergraduate rural habitat female students on Clerical Aptitude Test.

Ho41. There will be no significant difference between mean score of commerce and BCA undergraduate rural habitat female students on Clerical Aptitude Test.

Ho42. There will be no significant difference between mean score of BBA and BCA undergraduate rural habitat students female on Clerical Aptitude Test.

Ho43. There will be no significant difference between mean score of commerce and BBA undergraduate urban habitat male students on Clerical Aptitude Test.

Ho44. There will be no significant difference between mean score of commerce and BCA undergraduate urban habitat male students on Clerical Aptitude Test.
Ho45. There will be no significant difference between mean score of BBA and BCA undergraduate urban habitat students male on Clerical Aptitude Test.

Ho46. There will be no significant difference between mean score of commerce and BBA undergraduate urban habitat female students on Clerical Aptitude Test.

Ho47. There will be no significant difference between mean score of commerce and BCA undergraduate urban habitat female students on Clerical Aptitude Test.

Ho48. There will be no significant difference between mean score of BBA and BCA undergraduate urban habitat students female on Clerical Aptitude Test.

Ho49. There will be no significant difference between mean score of total sample of commerce and BBA undergraduate students on Clerical Aptitude Test.

Ho50. There will be no significant difference between mean score of total sample of commerce and BCA undergraduate students on Clerical Aptitude Test.

Ho51. There will be no significant difference between mean score of total sample of BBA and BCA undergraduate students on Clerical Aptitude Test.

1.7 Relevance of the study:

In the present age the need of perfect and sharp expression, it is as much necessary as thought of education. Logical technique of language fulfills both these needs. So if the logical aptitude of the students can be identified and show them the proper direction, god citizens can be made.

Present study will be useful in following matters:

- This test will be useful in measuring logical aptitude of the students.
- Student’s logical aptitude can be identified to divert them in right direction.
- Educational guidance can be given better by measuring logical aptitude.
- It will be very useful for logical and academic achievements.
- It will be very useful in studying the relation between logic and intelligence.
- Obstacles in logic could be found out and their solutions could be prepared.
School, teacher and parents can prepare programs to develop logical aptitude. Necessary guidance for future research will be available.

1.8 Area of Research:
The present research was conducted taking sample from students of Commerce and Management Stream from the North Gujarat Region.

1.9 Type of Research:
The present research was Descriptive Survey by its nature.

1.10 Method of Research:
In the proposed research, investigation survey method was employed.

1.11 Universe of the Research:
The proposed research is to frame the test and to check the effectiveness of Clerical Aptitude Test for the Undergraduate Students of the Commerce and Management Stream were considered as the population of the study.

Selection of Sample:
For any good research, it is mandatory on the part of the researcher to study the population and sample in depth. To define population and sample is necessary for good research work. According to Kulbirsing Sindhu (1999), “By population we mean the aggregate on totality of objects or individuals regarding which inferences are to be made in a sampling study. A population is any group of individual that have one or more characteristics in Common that are of the research.” Sometimes it is not possible to examine every item in population. Sometimes it is possible to obtain sufficiently accurate results by studying only part of the total “population”. However, in certain cases, a few items are selected from the population in such a way that they are representative of the universe. Such a section of the population is called a sample and the process of selection is called sampling. A sample is the reflection of the universe and bears all the characteristics of the universe. According to D. N. Elehance, “The main aim of sampling studies is to obtain maximum information about the phenomenon under study with the least sacrifice of money, time and energy,”

The researcher had decided to perform the experiment with students of commerce stream, BBA stream and BCA stream from the Kadi sarva Vidyalaya University, Ganpat University-Kherva, Gujarat University and Hemchandracharya North Gujarat University-Patan. There are 150, 150 and 150 students were Commerce
stream, BBA stream and BCA stream were selected from the Kadi Sarva Vidyalaya: Gandhinagar respectively. It is also observed that 150, 150 and 150 students were Commerce stream, BBA stream and BCA stream were selected from the Ganpat University-Kherva respectively. It is also observed that 600, 600 and 600 students was Commerce stream, BBA stream and BCA stream were selected from the Gujarat University-Ahmedabad. It is also observed that 600, 600 and 600 students were Commerce stream, BBA stream and BCA stream were selected from the Hemchandracharya North Gujarat University: Patan. Finally 1500, 1500 and 1500 students were Commerce stream, BBA stream and BCA stream were selected as the total sample of the study. From the above tale it has been also showed that 450 student were selected from the Kadi Sarva Vidyalaya:Gandhinagar, 450 student were selected from the Ganpat University-Kherva, 1800 student were selected from the Gujarat University-Ahmedabad and 1800 student were selected from the Hemchandracharya North Gujarat University:Patan.

1.12 Limitations of the Research:

In the proposed research, keeping in mind time, energy and expenditure following matters were considered. According to John best (1963): “This recognition helps to focus attention on valid objectives and help to minimize the dengers of ever generalization”.

The area of present study was delimited to the students of North Gujarat studying in the commerce and management faculties and students from the undergraduate colleges. It will also be delimited to the students of the streams of selected colleges from the Guajarati medium studying during the year of 2012-2013. Medium of the language of the tool were delimited for the Guajarati medium only. In the proposed research, out of various aptitudes, only verbal logic was selected. The proposed research was limited to selected colleges from the government, Grant in Aid and self-financed colleges of four districts of North Gujarat.

1.13 Research Method: Tools of the Study:

To collect the data for the present investigation the investigator will prepare Clerical Aptitude Test and Lickert Type of Test were prepared by finding the discrimination value of each question/items of the test. Finally the constructed tools were applied by using the alternative choice based answer. Reliability and Validity were carried out and norms were prepared for Clerical Aptitude Test.

1.14 Data Collection and Statistical Treatment:
Data for the present research were collected by the investigator by taking permission of principal from the selected colleges and proposed time duration Test were applied by using random sampling technique. Selection and classification of the data of the study with reference to sample were classified as follows.

1. Gender wise sample of the study
2. Habitat wise sample of the study
3. Caste wise sample of the study.
4. Education Stream wise sample of the study.

For the calculation of the data, the researcher were employed the formulas of Mean, Standard Deviation, t-value, F-Value and Correlation.

**PLANNING OF NEXT CHAPTER**

Planning of the chapter 2, 3, 4, and 5 are given as under.

Chapter-2: Review of related literature
Chapter-3: Research design
Chapter-4: Data Analysis and Interpretation
Chapter-5: Findings and suggestions for further research.