CHAPTER III

PLAN PURPOSE AND SIGNIFICANCE

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CHAPTER – III

PLAN PURPOSE AND SIGNIFICANCE

3.00 INTRODUCTION

The critical review of related literature along with the Rationale of the study has been provided in Chapter II. In the present chapter Scope & Significance, Objectives, Hypotheses, Delimitation and Operational definitions have been presented in detail under various separate Captions.

One of the important problems that India is facing at present is the population explosion. The size of manpower available in the country and the rate with which it is increasing has become a critical national problem. But it is not enough. What is much more relevant with even greater social significance is the quality of human capital available in the country. The optimum national development of a nation rests upon its fullest exploitation and utilization of its human as well as material resources. The best economic reconstruction of any country depends upon its quality of human resources.

Thus India is currently facing three fold quality crises: i.e. population explosion, man-power quality crises and misutilization of problem of optimum exploitation and utilization of human energy available and latent in the country. Further the latent potentialities which are unfolded later on in the human population through schooling, training, and social learning and worldly wisdom bring qualitative excellence in the human resource development. Thus in order to have a correct perspective of human potentialities its total assets and liabilities of a nation, it is essentially needed to have a sound knowledge of social group. Knowledge of assets and liabilities of human potentialities of scheduled caste and scheduled tribes of chhattisgarh, thus goes along with this sound. ‘Man power Management’ – policy and programme of this vast country.
The diagnosis and identification of peculiar potentialities and diverse dispositions differential traits and temperaments, specific talents and tendencies, distinctive aptitudes and interests of the Indian folks dwelling in different parts of the country with different physical and social environments and ecology constitute one of the significant national problems with great socio economic relevance demanding urgent solution. And in a democratic country like India with democratic socialist pattern of society and its ultimate national aim, the underdeveloped downtrodden communities like the Scheduled Caste and Scheduled tribes constitute a considerable size of the Indian population, rather demand greater attention for their upliftment and advancement. It is in the fitness of this social thinking that diagnosis and identification of human assets and liabilities, diverse traits and talents and distinctive aptitude, abilities and interest of the Scheduled Caste and Scheduled tribe pupils whose latent potentialities are yet to be unfolded and designed, are considered rather problems of great concern to all those who are, in same way or other, involved in the thinking of optimum progress and prosperity of all section of the Indian Society. The total national development depends upon the extent to which all communities whether Scheduled Castes or Scheduled tribes are given equal opportunities for their optimum development. Optimum human resource development is one of the primary sources for such a national reconstruction and economic development of this developing country.

3.10 **SCOPE AND SIGNIFICANCE**

In View of the significance of pupils of the Scheduled Caste and Scheduled Tribe of the society as future citizens in the nation building process, their educational growth and development and the nature and kind of learning adaptability as well as their cumulative deficits phenomenon interacting with their learning deficits, is essentially needed to have an in depth study of their psychological causes and consequences of their deprivations affecting their scholastic attainments. Their knowledge may function as supportive system in their academic development. It is also important to know exactly the nature and kind of
their aptitudes as well as their interest patterns, which may facilitate or inhibit their learning style and academic activities.

Pupils of Scheduled Caste and Scheduled tribes are considered to be important class of the Indian Society whose participation in the development and advancement of the country cannot be underestimated. Educational services, training programmes, lifelong educational practices, educational rehabilitation services and enriched, accelerated content, oriented teaching, learning and evaluation programmes would certainly bring about significant change in the quality of pupils excellence in academic achievement and in various life situations. Consequently, exact knowledge of their potentialities and any educational programme that lead to their fullest development will always be a welcome strategy.

In a welfare state like India, knowledge of their potentiality their performance level of Academic Achievement will help all sections of the society as well as the policy makers. The human resources inherent in the target population need to be optimally developed and exploited for the cause of the nation.

The significance of the Scheduled Caste and Scheduled Tribe studies and their scope have been outlined as under:

- The Scheduled Caste and Scheduled Tribe community is a special concern to the Government of India. The utilization of vast human capital which the SC and ST community possession is the most challenging problem today. Thus it has a direct bearing on the national progress and prosperity, growth and development.

- The study is useful to policy makers and planners of the tribal welfare Schemes; and to any programme meant for the SC & ST section of the society.

- The present study is significant for guidance workers and counselors. The study of scientific Aptitude and Interest would help in tapping a SC & ST student educationally and vocationally for successful competitive career.
The study would equip the educationalists and practical teachers with a psychological foundation in designing the structure and pattern of education more meaningfully and appropriately for a need-based course content; which will promote the functional validity of the educational system.

The Study would be helpful to parents and pupils in diagnosis and identification of scientific aptitude and interest which may help them for improving the standard of their scientific thinking and their educational and vocational aspirations and goals; thereby helping them to set a reality oriented goal-setting behavior and subsequently optimization of goal-attainment process.

The study is significant to the executives in designing and executing the developmental national programmes.

The study would be helpful to the social scientists in exploring scientifically and predicting more meaningfully and accurately the possibilities and probabilities of aptitudes and interest pattern among the Scheduled Caste and Scheduled Tribe pupils. This would help the nation to have a check over educational wastage and stagnation on one hand; and would present an accountability for SC & ST development in proportion to the expenditure incurred towards them.

It is logical to deduce that a student with higher aptitude in certain field of knowledge and skill would excel in a related academic performance. It is therefore, significant that the present study has a direct bearing upon the educational accomplishment of the Scheduled Caste and Scheduled Tribe pupils.

The study would check to a large extent the educational wastage, withdrawal and stagnation in elementary schooling.

The findings of the investigation would bring attitudinal change among the Scheduled Caste and Scheduled Tribe which may facilitate the execution and implementation of educational and vocational national programmes. The study
would certainly add to the available literature bridging thereby the existing gap in the Scheduled Caste and Scheduled Tribe studies on aptitudes and interest in particular. It is assumed that if a student has suitable scientific and differential aptitude and Interest then he would decidedly be better in his level of performance not only in science but he would be more methodical, systematic and rational in his thinking and behaviours, which would be transferred during his adult life and vocational career.

3.20 OBJECTIVES OF THE STUDY

The present study has been designed with the following objectives.

- To study the effect of Aptitudes and Interest patterns on scholastic attainments of pupils of Scheduled Castes and Scheduled Tribes of the society.

- To study the nature and the kind of the Aptitudes the Interest patterns and the level of Scholastic attainments of pupils of Scheduled Caste and Scheduled Tribes.

- To estimate the relationship that exist among the scholastic attainments in various school subjects namely Languages, Social Science, Science and Mathematics of the pupils of Scheduled Castes and Scheduled Tribes.

- To study the nature and kind of inhibitory factors that affect adversely the scholastic attainment of target pupils.

3.30 FORMULATION OF HYPOTHESES

From the point of view of the nature and statistical treatment, the hypothesis formulated in the present study, have been grouped in three heading.

PART – I : CORRELATIONAL HYPOTHESES

$H_1(C)$ “Scholastic Achievement would be significantly and positively correlated with various types of Aptitudes (DAT & SAT).”
\[ H_2(C) \] "Scholastic Attainments in (a) Languages (b) Social Science (c) Mathematics and (d) Science would be Significantly as well as positively correlated with Interest Patterns"

\[ H_3(C) \] "The total scores on Scholastic Attainments would be significantly and positively correlated with DAT and Scientific Aptitudes as well as Interest Patterns".

**PART II : INTERACTIONAL HYPOTHESIS**

[A] Interactional Effect on Scholastic Attainment:

\[ H_4(I) \]: "The relative effect of caste would be significantly higher on Scholastic Attainments in comparison to the effects of Sex and Locale, whereas the effect of Locale would be relatively, observed as the lowest one but significant".

[B] Interactional Effect on Aptitude Scores:

\[ H_5(I) \]: "The scores on various Aptitudes would be most significantly interacted by Caste and would show least effect by Locale, whereas Sex would indicate relatively and moderately significant effect on various Aptitudes".

[C] Interactional Effect on Interest

\[ H_6(I) \]: The Interest pattern would be significantly governed by the Sex differences, whereas it would have least effect of Locale"

In other words the sex differences would have significantly a predominant effect as Interest patterns regardless of caste differences, whereas Locale would have rather no significant effect on Interest differentials. As such, the effect of Caste on Interest patterns would be least.

**PART III : DIFFERENTIAL HYPOTHESIS:**

[A] SEX DIFFERENCES: BOYS / GIRLS

\[ H_7(D)(1) \] The Scholastic Attainments of the boys and girls would show significant difference in all the four major school subjects, namely Languages, Social Sciences, Science and Mathematics".
H7(D) (2) There would be significant sex difference in the scores on various Aptitudes indicating boys excelling girls in all Aptitude counts".

H7(D) (3) The Interest patterns of the boys would be significantly different from those of the girls".

[B] LOCALE DIFFERENCES: RURAL / URBAN

H8(D) (1) The scores on Scholastic Achievements of the rural pupils would be significantly inferior to those belonging to urban pupil. However Rural boys would score on all counts significantly higher than Urban boys but the scores of the rural girls would be significantly inferior to the urban girls.

H8(D) (2) The scores on various Aptitude Tests by rural pupils would be significantly inferior to those belonging to urban pupil. However Rural boys would score on all counts significantly higher than Urban boys but the scores of the rural girls would be significantly inferior to the urban girls.

H8(D) (3) The Interest pattern of the rural pupils would be significantly inferior to those belonging to urban pupil. However Rural boys would score on all counts significantly higher than Urban boys but the scores of the rural girls would be significantly inferior to the urban girls.

[C] INTERCASTE DIFFERENCES: (SC / ST)

H9(D) (1) The scores obtained on various school subjects of Scheduled Castes would be significantly higher than those by Scheduled Tribe pupils.

H9(D) (2) There would be significant difference in the scores on various Aptitudes indicating Scheduled Castes would be significantly higher than those by Scheduled Tribe Pupils.

H9(D) (3) The Interest patterns of Scheduled castes would be significantly higher than those by Scheduled Tribe Pupils.
3.40 DELIMITATIONS

The present study has been delimited by the following considerations.

- It is the study of the pupils of the Scheduled Caste and the Scheduled Tribe of Chhattisgarh.
- The study is confirmed to Scheduled Castes and Scheduled Tribe pupils of Raipur District, Chhattisgarh.
- The study is concentrated to the pupils studying in Class IX alone. Both boys and girls are taken for the study.
- The sample was delimited to the pupils of age ranging between 14 and 15 years.
- Only four dependent variables namely, scholastic attainments, Differential Aptitude Test (DAT), Scientific Aptitude Test (SAT) and Interest pattern would be included.
- The study as such is primarily a correlational one but has been extended to Differential and Interactional analysis too.

3.50 OPERATIONAL DEFINITIONS

Most of the concepts of psychological constructs have over remained to be controversial issue, and therefore they have been best defined operationally on the strength of the scores obtained by Subjects on a specific test. The description of the tests used for the study, rationale for their selection and instruments in the collection of data, have been presented in relevant Chapters IV. The operational definitions of the concepts of aptitudes and interests used in this study are as under:

1. Scientific Aptitude: SAT

Scientific Aptitude has been operationally defined in the present study as 'the total score obtained by a subject on the test of scientific aptitude prepared by Sinha and Sinha measuring seven dimensions namely Experimental Bent (EB), Detection of inconstancies or illogical conclusion (DI/IC), Ability to deduce conclusion from the data provide (ADC), Accuracy of interpretation (AI), Ability
to Reason and solve problems (ARSP), Caution and Thoroughness (CT), Accuracy of observation (AO), as described in Chapter IV under the caption “Instrument”.

2. **Differential Aptites : DAT**

Differential Aptitude tests have been operationally defined in the present study as ‘the total score obtained by the subject on various dimensions of DAT namely Space Relation (SR), Numerical Ability (NA), Verbal Reasoning (VR), Mechanical Reasoning (MR), Abstract Reasoning (AR), Language Usage - Spelling & Grammar (LU - sp, LU - gr), Clerical Speed and Accuracy (CSA), prepared by J.M.Ojha in Hindi adapted under Indian Conditions as described in Chapter IV under caption “Instrument”.

3. **Interests**

The test of Interest Pattern has been operationally defined as ‘the total score obtained by the subject measuring the ten dimensions of Interest Pattern namely Fine Arts, Literary Work, Science, Medical, Agricultural, Technical, Craft, Outdoor, Sports, Household standardized by Chatterji’s Non-Language Preference Record. The description of the test has been given in Chapter IV under the caption “Instruments.”

4. **Scholastic Attainment**

The Scholastic Attainment has been operationally defined as ‘the total scores obtained by the subject on one External (VIII Board) and one Internal Exam (IX Quarterly) in English, Hindi, Maths, Science and Social Science.