

C H A P T E R - I VREVIEW OF RELATED STUDIES

In a country like India, which has chosen the democratic rather than the totalitarian path of development, education has to play the main role in all its national endeavours. To achieve the multiple but interdependent goals of personal, economic, political, social and cultural development, it is necessary to make appropriate provision for integrated programmes of education for people who happen to be living at different levels of personal and economic development, possessing different linguistic, social and cultural backgrounds. To enable the education system to play its role effectively in the process of national development, along democratic lines, it is essential that besides ensuring that all people get the benefit of education, it is also necessary to know their attitude towards education at the grass root levels so as to take up the necessary remedial measures.

Particularly, the progress of the pupils as pointed earlier, depends upon the attitude they form towards education, since the attitude

motivates their thinking and subsequently they contribute the foundation to their future behaviour. Several Scholars investigated the attitudes of pupils, parents particularly of Scheduled Tribes and Scheduled Castes, towards many psychological subjects like the school courses, educational institutions, living conditions, religion and so on. Some of these are summarised hereunder.

GAYLEN R. WALLACE, STEVEN D. SPANNER (1980)¹ studied "Factorial Comparison of the Wallace self-concept scale between special education teachers and regular class room teachers." The purpose of this study was to test factorial invariance of the Wallace self-concept scale across two groups of teachers, one group referred to as regular class room teachers and the other as special education teachers.

Two samples of teachers from a mid-western metropolitan area, both elementary and secondary were included in this study. The Wallace self-concept scale is a 15 item bi-polar adjective

1. Gaylen R. Wallace, Steven D. Spanner, and Peggy S. Filer, University of Missouri - St. Louis, cited in "EDUCATIONAL AND PSYCHOLOGICAL MEASUREMENT", Vol. 44, No. 2, Summer, 1984.

scale designed to estimate the perception one holds towards the concept. Since the study was designed to sample across individuals instead of variables, the Varimax-Harris-Kaiser sequence recommended by Goresuch (1974) was used. A SPSS routine for principal components Factor Analysis was performed and each structure was then rotated to the normalised varimax solution (Nie, Hull, Jenkins Steinbrenner and Bent, 1975). Factor structure similarity between varimax solutions for special education teachers and regular class-room teachers was determined by the use of Kaiser's (1960) formulations which are included in Veldman's (1967) factorial invariance programme, RELATE.

In this study the factors are considered to be invariant following the guide suggested by Herman (1967) to determine cosine congruence, "----co-efficients ranging from .9999984 down to .939811----" (p. 271). In addition to factorial invariance, the RELATE program gives test vector cosines which indicate the degree of relationship between the factorial comparison of the Wellace, ----" the two sets of vectors after rotation of the factor axes.

K. ROBERT BRIDGES (1985)² studied "The parent education design scale development and factor structure." The purpose of this paper was to describe the construction and factor of this paper was to describe the construction and factor analysis of an attitude scale instrument entitled the parent Education Design Scale. The scale was developed in order to (1) empherically identify the most salient issues involved in parent education design and 2) to provide an instrument to measure the attitudes of participants toward those issues.

Likert-type items were developed from the literature and from suggestions from colleagues and students. These were opinions to which respondents were asked to agree or disagree strongly or mildly on a 4-point scale. The scale was administered to 484 freshman and shopmore students between the ages 18 and 21 years at the Pennsylvania State University.

Principal components factor analysis (Dixon 1981) was used to generate the factor matrix followed

2. K. Robert Bridges. The Pennsylvania State University, New Kensington, Pennsylvania, Cited in "EDUCATIONAL AND PSYCHOLOGICAL MEASUREMENT 1985, Vol. 45, No. 4, Winter 1985, p. 729.

by varimax and obliquerotations. As the correlation between factors were small with the oblique solution, only the varimax solution will be examined further (Rummell, 1970, p. 388). The Scree test (Cattell, 1966) found by Zwick and Velier 1982, to be the most accurate rule for determining the number of factors to retain, indicated two breaks, one at five factors and the other at eight. The seven factors which were retained for additional analysis accounted for 40% of the variance.

Factors were named based on the content of items with factor loadings that exceeded .30. Factor I, identified by seven items and factor IV, identified by six items, appeared to be curriculum factors. Factor II contained seven items and suggested a definition of attendance i.e. mandatory and voluntary attendance. Factor II, loading 7 items, emerged as an enrollment or clientele factor. The items were those groups to which the parent education should be directed. The six items on factor 5 and five items on factor VI were collectively judged to represent factors about the development and administration of parent education. Factor VII had 4 items and appeared to be a measure of outcomes foreseen by respondents.

JOHN L. HORN (1965)³ et. al., studied the "Dimensions of teacher attitude." In this a factor analytic study of the Minnesota Teacher Attitude Inventory, employing responses of 306 college students enrolled in education courses, yielded evidence contradictory to the hypothesis of 1 factor, suggesting instead the existence of 5 covarying patterns of items.

Factor I appeared to show a 'modern' attitude toward class room control as contradicted with free Deweyian or "traditionalistic" attitude, and factor II gave a reflection of an optimum-favourable vs. pessimism - unfavourable dimension of opinions about pupils. Factor III suggested to represent a permissive lack of concern Vs. punitive concern about "smart" "rebellious" behaviour, while factor IV suggested the rejection of pupils, but a rejection stemming from bewilderment rather than from dislike or punitiveness. Finally factor V reflected to indicate a desire to maintain control over children vs. an inclination to let them "run free".

3. JOHN L. HORN & W. Lee Morrison (1965), "Dimensions of Teacher Attitudes", JOURNAL OF EDUCATIONAL PSYCHOLOGY, June, 1965, Vol. 56, No. 3, pp. 118-125.

C.G.N. HILL (1956)⁴ studied "An evaluation of some aspects of the development of the pupils in secondary modern schools". Based on the writings of the educationists, ten classifications of the educational objectives were made and a series of tests were devised.

In finding the first objective, (namely the integrated personal philosophy, liberal social attitudes, moral values, appreciation of, and desire for further education, realistic vocational choice), the second measuring instrument was attitude towards education with the Thurstone type.

The results obtained suggested the need for modern schools to formulate their objectives more specifically. The investigator also suggested that many changes in curriculum and teaching method were to be brought out, if the pupils were to be given knowledge skills, attitudes and understanding that are essential for effective living.

4. C.G.N. HILL (1956) "An evaluation of some aspects of the Development of pupils in Secondary Modern Schools". "THE BRITISH JOURNAL OF EDUCATIONAL PSYCHOLOGY, Vol. XXVIII, Part III, June 1958, pp. 177-180.

Gene. R. MEDINNUS (1962)⁵ investigated "The development of a parent attitude towards education scale". The scale consisting of 40 statements was administered to 68 parents of 5 year old children. The socio-economic status of the family was approximately evenly divided between the upper-lower and lower-middle classes. The mean ages of the mothers and fathers were 32.1 and 34.1 years, respectively and the corresponding mean years of education were 12.0 and 12.2.

He had taken the attitude of the parents towards the school in matters of discipline, their own educational experiences, and their evaluations of the importance of education. The results emerged indicated that no statistically significant differences were found, when scores were compared on the basis of education or socio-economic level of the respondents.

ROBERT S. MILLER (1963)⁶ in his study "Educators attitude toward educational practices", investigated

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5. Gene. R. Medinnus (1962) "The Development of a Parent attitude toward Education Scale". "THE JOURNAL OF EDUCATIONAL RESEARCH", Vol. 50, No. 2, Oct. 1962, pp. 100-103.
 6. Robert S. Miller (1963) "Educator's Attitudes toward Educational Practices", JOURNAL OF EDUCATIONAL RESEARCH, Vol. 56, No. 8, April 1963. p. 424.

the differences of attitude between defined sub-groups of professional educators in regard to the controversy over educational procedures.

A questionnaire was constructed with 140 items exemplifying 6 attitudes and respondents were asked to indicate agreement or disagreement with the statements "Subject-centred, child-centred, school-community co-operation: favourable or unfavourable." The responses of these six groups were compared by Chi-square.

Individual items did not differentiate well between sub-groups, but each ten-item attitude differentiated significantly, both when responses from all six sub-groups were compared together and when sub-groups were compared by pairs. These differences were demonstrated in a significant minority of comparisons. Finally, it was demonstrated that the responding educators distinguished clearly between favourable and unfavourable attitudes.

KERLINGER F.N. (1959)⁷ et. al. did "The construction and factor analytic validation of scales to measure attitudes toward education". Prior to this, Kerlinger studied (1) the attitude structure of the individual; AQ-study of the educational attitudes of Professors and Layman"^{7a} and (2) "Progressivism and Traditionalism; basic factors for educational attitudes".^{7b}

In the above two Q-studies, two factors of educational attitudes, Progressivism and Traditionalism or A and B, were emerged. In the present study it was aimed at testing of the cross-educationally the previous studies, testing the reality of the two factors, developing and validating the instruments to measure attitudes toward education and comparing the relative strength and weakness of Likert-type and rank order forced choice attitude scales.

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7. Kerlinger F.N. and Esin Kaya (1959) "The construction and factor analytic validation of scales to measure attitudes toward education". EDUCATIONAL PSYCHOLOGICAL MEASUREMENT Vol. 19, No. 1, Spring 1959, p. 13.
- 7a. Kerlinger F.N. "The attitude structure of the individual: AQ-study of the educational attitudes of Professors and Laymen". GENETIC PSYCHOLOGY MONOGRAPHS." Vol. LIII, 1956, pp. 283-329.
- 7b. Kerlinger F.N. "Progressivism and Traditionalism: Basic factors of Educational Attitudes", JOURNAL OF SOCIAL PSYCHOLOGY, Vol. XLVIII (1958), pp. 111-135.

In the first two studies in this (here after called Q-Ed.1, and Q-Ed.2,) a theory of educational attitudes was set up and tested. Attitudes were broken into restrictive-traditional and permissive progressive and the areas into teaching-subject matter curriculum, normative-social, and inter personal relations, authority-discipline to serve for two dimensional statements.

The highly saturated items of both factors were incorporated after the first testing and Item Analysis, into two educational scales (E.S.-I, and E.S.-II). Using Likert-type scale for ES-I with 20 items 10-A, 10-B, and rank order forced-choice scale for ES-II consisting of 10 blocks for 4 items each, of which one was highly saturated B item and two non-saturated or neutral buffer items. The scales were administered to 598 subjects, about half were graduates (G's-s) and under-graduates (U'-S) education students and half outside the university (OP'S). The scales were scored inter-correlations computed and factor analysed.

It was concluded from the findings that the Likert scale (ES-I) yielded a clear factor structure.

The factor Analysis of both the scales yielded three factors and two out of these three were interpreted as being the original Progressivism and Traditionalism factors. The correlations of items with the total factors, scores were computed and the results of these analysis appeared to establish the construct validity of the instrument.

KERLINGER F.N. (1959)⁸ et. al., studied "The predictive validity of the scales constructed to measure attitudes toward education." This study was concerned to the discussion of what might be called the predictive validity analysis of the data of the original 598 subjects,⁹ i.e. mainly the analysis of variance and co-variance of the three groups of the subjects.

The scores of A, B, and A-B were used to make predictions. It was predicted that meant under-graduate students would make little or no distinction between the A and B factors, whereas most of the graduate students would make such

8. Kerlinger F.N. and Esin Kaya: "The Predictive Validity of Scales constructed to measure attitudes toward education." EDUCATIONAL PSYCHOLOGICAL MEASUREMENT, Vol. IXX, No. 3, Autumn, 1959, pp. 305-317.

9. Kerlinger F.N. cit.

a distinction. Thus low and zero A-B scores were predicted for under-graduates, as compared to high A-B scores for graduates. It was also predicted the people outside the university would get low zero and minus A-B scores. The reasons being the graduate students generally tend to accept more the norms of the teacher-training institutions and by their experience than the under graduate students and people outside the university would generally 'inconsistent in their educational attitudes' because their pre-occupation, and their interest was not educational.

ES-I and ES-II were administered to 136 undergraduate education students, 157 graduate education student and to 305 people outside the university. To get an estimate of repeat reliability, both scales were administered to 106 of the students second time 3 to 4 months later.

From the results obtained after various computations, it was noticed that most of the predictions were confirmed. The reliability in all the groups was fair and the repeat reliability was not too unsatisfactory.

Kirrlinger F.N. (1961)¹⁰ in his study "Factor invariance in the measurement taken in A. Progressivism, B. Traditionalism, with different samples of persons, as orthogonal factors using Likert-type scales; to find out the variance of factors A and B. Of his previous study¹¹ and to assess the effects on factor structure of different samples and different measurement instruments.

The five attitude towards education scale viz., ES-I, II, III, IV and V of which ES-I was a 7 point Likert Type scale of 20 items, 10-A 10-B each ES-II was a rank-order forced-choice scale of 10 items each of A and B, ES-III was a modified fair combinations instrument with 20 items 10-A, and 10-B, ES-IV was a forced choice scale of 10 items each item consisting of two items each item consisting of two items each item consisting of A items and two B items, and ES-V was a Likert-type scale of the same form as ES-I; was administered in his study I to 74 graduate students and then in his study II to 165 graduate

10. Kerlenger F.N. "Factor invariance in the measurement of attitudes towards education," EDUCATIONAL AND PSYCHOLOGICAL MEASUREMENT, Vol. XXI, No. 2, 1961, pp. 273-385.

11. Kerlenger F.N. op. cit.

students (G) of a large municipal school of education, to 51 under-graduates (U) and to 196 people outside the university (OP), teachers were excluded.

After study I, the items were inter correlated by finding product-moment correlations, factor analysed by THURSTONE'S method of principal components using the highest correlations in each column as the communality estimates, and then orthogonally rotated. After Study II, the data of U's, G's and OP's, and the data G's and OP's were inter-correlated and factor analysed using the THURSTONE centriod method and orthogonal rotations.

The following are his findings:

The patterns of the correlations of the matrices of inter-correlations agree well when compared with Fisher's Z. The first appropriated most of the common factor invariance. The loading expectations outlined previously were, with certain exceptions fulfilled.

The results of the five factor analysis were theoretical expectations. The average coefficient of agreement for A was .85, for B it was .84. ES-I, ES-II and ES-IV reliably load where they should. E-III confirmed to expectations only

on A and that not too well. The ES-V patterns of loadings of the Study I graduates and the Study II under-graduates were unreliable. But in Study II with graduates and OP's, a reliable pattern of loadings emerged.

CHAND J.¹² studied "A comparative study of various Naga tribal pupils in relation to their self perception, socio-economic status, vocational and educational aspirations and academic achievement". The objectives of the study were (i) to find out the differences in the self perception of pupils belonging to the Angami, AO and Sema tribes (ii) to find out the differences in self perception among pupils belonging to high, middle and low socio-economic status of the Angami AO and Sema tribes (iii) to study the vocational choices and their reasons for vocational choices of the pupils of the three Naga tribes and also to study differences regarding vocational choice and reasons for them in the case of Naga pupils of the three tribes of high, middle socio-economic

12. Chand J. (1985), "A comparative study of various Naga tribal pupils aspirations and academic achievement", Ph. D. Edn., NEHU, "RESEARCH IN THE EDUCATION OF THE DISADVANTAGED" cited in FOURTH SURVEY OF RESEARCH IN EDN., 1983-88, Vol. II, MB Buch, Chief Editor, NCERT, (1991), p. 1427, No. 1600.

status, (iv) to study the academic aspirations of the pupils of the three types of different socio-economic status, and (v) to study the academic achievements of pupils of the three tribes of high, middle and low socio-economic status.

A sample of 674 pupils (353 boys and 321 girls) of class IX drawn from 10 high schools of 3 Districts was randomly drawn. The tools used were the Deo-Jogawar Self-Concept Inventory, a vocational aspiration scale, a Vocational Prestige Value Scale and an Achievement Test in general science and mathematics for pupils of class IX. Student t-test was used to test the various hypotheses formulated on the basis of the objectives.

Some findings were (i) while the Sema pupils were found to be significantly different from the Angami and AO students in respect of self-perception, the pupils belonging to the Angami and AO tribes appeared similar. (ii) Self-perception of Sema boys was significantly different from those of Angami and AO boys. (iii) The vocational choices of girls were not found to differ significantly from one another. (iv) The academic achievement of the boys was significantly different from that of girls in the respective

tribes and (v) There were differences in the preference of vocations according to SES.

PAL, P.¹³ "A comparative study of the personality pattern of Scheduled Caste students and High Caste students in the State of Haryana." The objectives of the study were (i) to find out differences between the Scheduled Caste students and High Class students on 14 personality factors (CATTELL), (ii) to find out differences between Scheduled Caste student and high class student on 6 values - theoretical, economic, aesthetic, social, political and religious, (iii) to find out differences between Schedule Caste and high class student on three dimensions of self-concept, viz., perceived self, social self and ideal-self, and (iv) to find out difference between scheduled caste student and high class student with respect to intelligence.

The hypothesis of the study was that there existed significant differences between scheduled caste and high caste student on 14 personality

13. Fourth Survey of Research in Edn. 1983-88, Vol. II, P. 1446, No. 1628, 1991.
Ph. D., Edn., Kur. U., 1984.

factors, 6 values, 3 dimensions of self-concept and intelligence.

The sample of the study consisted 200 Scheduled Caste students (100 boys and 100 girls) and 200 High Caste students (100 boys and 100 girls) of class IX belonging to 60 Government as well as aided High and Higher Secondary Schools. The students were administered Cattell High School personality questionnaire and Alport Vernon and Lindzey Inventory of values. The data so collected was analysed with the help of analysis covariance with one covariate.

Some of the findings of the study were (i) when the influence of age and grade was controlled Scheduled Caste students differed significantly from their High Caste counterparts on 6 out of 14 personality factors. (ii) Scheduled Caste boys possessed poorer self concept as compared to high caste boys. (ii) Scheduled Caste girls in comparison with caste girls were found to possess low ability to reason by analogy.

SUJATHA, B.N.¹⁴ and YESHODHARA, K.: "A comparative study of some educational variables of Scheduled Castes and Scheduled Tribes students". The major objectives of the study were (i) to study the level of academic achievement (AA), achievement motivation (AM), school adjustment (SA) and personality factors (PF) of SC/ST and non-SC/ST high school students, (ii) to make inter-group comparisons with respect to the above mentioned variables, (iii) to find out the relationship between academic achievement and other educational variables selected for the study--achievement motivation, school adjustment and personality factors, and (iv) to find out the relationship between academic achievement, achievement motivation, school adjustment and personality factors and background variables like socio-economic status (SES) and type of school (TS).

The sample consisted of 1340 class IX Kannada medium students selected by the stratified random

14. Sujatha B.N. "A comparative study of some Educational variables of SC/ST students" - A thesis for Ph. D. Mysore University, 1986, published in Fourth Survey of Educational Research in Education, 1983-88, Vol. II, NCERT, 1991, p. 1460, No. 1650.

sampling method, giving proportionate representation to SC/ST and non-SC/ST students, and also to boys and girls. It was drawn from 27 high schools, out of which 14 were government schools and 13 were private. The study was a descriptive-cum-correlation type. The required data were collected by using a Kannada version of Prayag Mehta's Achievement Motivation Inventory (verbal), a Kannada version of N.M. Bhagia's School Adjustment Inventory, a Kannada version of Cattell's Junior-Senior High School Personality Questionnaire-HSPQ-Form A (Age 12 through 18), and a revised version of Kuppuswamy's SES Scale (Urban).

The major findings were (i) SC/ST students were low in their academic achievement motivation. They had relatively poor school adjustment compared to non-SC/ST students. (ii) Both SC/ST and non-SC/ST students were low on the personality factor and were average on other factors. (iii) There was a significant association between academic achievement and type of school in the case of SC/ST students, but not in the case of non-SC/ST students. (iv) Personality factors C, G and Q, in the case of SC/ST students and only G and Q

in the case non-SC/ST students were not dependent on the type of the school. (v) Personality factors B and school type were related in the case of non-SC/ST students.

SUKUMAR BOSE (1966)¹⁵ had 'An analysis of the secondary school students' views and evaluation of educational objectives'. 100 boys and 100 girls were selected at random from 10 boys and 10 girls secondary schools located in different zones of Calcutta city.

Through instructed interview, a list of 13 educational objectives i.e. to become a respected member of the society, to become a good citizen, to gain knowledge, for a successful placement in life, as a basic requirement for technical education, preparation for happy life, to earn money for maintainance of family, to become a scholar, to be fit for higher studies and to overcome obstacles of life; was prepared and presented to 5 boys' and 5 girls' groups consisting of 10

15. Sukumar Bose (1966) "An analysis of the secondary school students' views and evaluation of educational objectives", JOURNAL OF PSYCHOLOGICAL RESEARCH, Vol. X, May 1966, No. 2, p. 86.

individuals each by paired comparison method, to express their preferential judgements. The mean of the c-scores of each group was converted into Z-zones and then to Z'- scores.

From the results obtained, it was concluded that both boys and girls preferred social recognition, to scholastic success and that they were conscious of the necessity of education, as a means to earn livelihood.

AUDREY M. FESSLER (1956)¹⁶ studied "The attitudes and interests of girls attending a day continuation college". The aim was to discover the attitudes and interests of girls aged 15-18 years, in educational topics.

Most of the findings were based on 504 students of a day continuation college of Midlands. The topics discussed were attitude to school life, co-education, further education, the seven types of lesson, curriculum with special reference to vocation, and interests in various aspects.

16. Audrey M. Fessler (1956) "The attitudes of interests of girls attending a day continuation college", "THE BRITISH JOURNAL OF PSYCHOLOGY, Vol. XXVIII, Part II, June, 1958.

The scores for the three age groups (aged 15-16, 16-17, 17-18) and the ability groups revealed favourable attitude of the students towards school life, co-education, vocational bias in education and the seven types of lesson and unfavourable towards the lecture method, social studies of not immediate concern and leisure, pursuits for educational purposes.

THOMPSON J.W. (1957)¹⁷ had "A Factorial Study of the values and attitudes of graduate teachers in training." The experimental group consisted of 138 students taking the graduate certificate in education at the University of Manchester, 63 of whom were men and 75 women.

Multi-category questionnaires including Alports Study Values, Wikerts-tests of personal values, Higsons-Study of educational values, Steeles-Likert-type scale of study of attitudes of education of Junior children, Thurstone-type scale of study of attitudes about the corporal punishment, Eysencks-inventory of Social Studies and Ovlivers' survey

17. Thompson J. W. (1957) "A factorial study of the values and attitudes of graduate teachers in training". THE BRITISH JOURNAL OF PSYCHOLOGY, Vol. XXVIII, Part II, June 1958, pp. 182-183.

of opinions about education. The 32 parts of the 7 questionnaires were factor analysed and 3 centroid factors were extracted and then rotated.

From the results, it was found that the systems of classification for values and attitudes of Brogden's idealism, Ferguson's religionism and humanitarianism could be extended to the values and attitudes of teachers in training. There were highly significant differences in factor scores between men and women, the latter being more religious, social, tender-minded, and educationally progressive than the men.

CHARLTON (1958)¹⁸ et. al. in their study "Students' attitudes to courses in Departments of Education in University" brought a comparison of the attitudes of the University College of North Staffordshire and their "Concurrent" course with those of students in the University of London to their Post Graduate Course.

18. Charlton (1958) "Students' Attitude to courses in Departments of Education in Universities", THE BRITISH JOURNAL OF EDUCATIONAL PSYCHOLOGY, Vol. XXVIII, Part III, Nov. 1958.

The THURSTONE & LIKERT-type attitude scale was administered to a group of London and Keele students at the beginning and end of their course. The results showed that both the students expressed the need for training in education to become a teacher, at the beginning of their course, but at the end of their course, they expressed that it was only a paper qualification.

EDWARD G. NALAN (1963)¹⁹ et. al. studied "Attitude formation in High School seniors: A study of values and attitudes." They used in the study were the California F-scale and Allport-Vernon study values. 261 pupils of 16 - 19 years of a High School in South-Western City served as the subjects for this study.

It was hypothesised that a positive correlation would exist between the California-F-scale scores and the economic, political and religious subscale scores respectively on the Allport-Vernon. It was also hypothesised that a negative correlation would exist between the F-scale scores and the

19. Edward G. Nala (1963) "Attitude formation in High School Seniors: A STUDY OF VALUES AND ATTITUDES". JOURNAL OF EDUCATIONAL RESEARCH, Vol. 57, No. 4, Dec., 1963, pp. 185-188.

theoretical, aesthetic and social sub-scale scores respectively. But the obtained correlations did not support the original hypothesis.

SRINIVASULU L. (1964)²⁰ investigated the additional changes of graduate student-teachers during the training course and in his investigation he studied the attitude towards Education, pupil growth and learning, curriculum planning, instructional technique, evaluation, teacher, supervision and inspection, school and community, and general aspects.

Prof. REDDY Y.N. (1991):²¹ studied "Psychological Strategies for the Educational Development of Socially Disadvantaged Groups". He divided this into two studies. Study I comprises "A Comparison of SC children with NON-SC as regards their general Mental Ability and aptitudes". The study commenced with the null hypothesis that there are no significant differences in the general mentalability and aptitudes of the SC and NON-SC castes.

Psychological tests in Telugu that were specially developed for the purpose were employed for measuring different types of abilities of students like: General

20.SREENIVASULU L. AN INVESTIGATION INTO THE ATTITUDINAL CHANGES OF GRADUATE STUDENT-TEACHERS DURING THE TRAININGCOURSE", Unpublished dissertation submitted to the Andhra University, 1964.

21.Prof. REDDY Y.N.(1991): "PSYCHOLOGICAL STRATEGIES FOR THE EDUCATIONAL DEVELOPMENT OF SOCIALLY DISADVANTAGED GROUPS", published in "INDIAN EDUCATIONAL REVIEW" (under Research notes) October, 1991, pp.143 to 153.

and mental ability (IQ), Scientific Knowledge, Numerical ability, Mechanical reasoning, Scholastic achievement in Mathematics and sciences and study skills. The sample in the investigation comprised classes IX and X in Andhra Pradesh, of SC and Non-SC categories. The data collected were statistically analysed. Mean, S.D. and 't' values were calculated for each test based on this comparison was presented.

There was no significant difference between the two groups in IQ and aptitudes, but pronounced difference could be noted them in their scholastic achievement in subjects like Mathematics and sciences. Chi-square values were computed between the problem and non-problem responses.

The result of the study confirmed the hypothesis that there were no differences in the abilities of the students irrespective of the caste and social status.

Study II: "The effect of interventions on class room performance". Pre- and post test control design with two experimental groups and one control group of subjects was adopted to find out the effect of interventions on the performance of students in Mathematics and Science. Three groups of 32 students of SC were taken up to constitute i) Experimental group I exposed to special tutorials and training in study skills for a period of six months ii) Group II was exposed only to tutorials and (iii) Group III controlled group not exposed to any of these.

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