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CHAPTER - III

PLAN AND PROCEDURE

The influence of advancements in the field of science and technology on varied aspects of life has resulted in its modernization which in turn has given rise to the new discipline 'Educational Technology' arising out of an explosion of knowledge. Educational Technology which is a new trend and a gift to the field of education, contributes to making the teaching-learning process effective and meaningful.

An application of a scientific approach to teaching and learning has made it possible to provide circumstances which enable the work of the teacher to become considerably effective.

It is Educational Technology that will gear the teacher-educators to the needs of the changing society.

Every teacher-educator is capable of making best use of Educational Technology for improvement of their classroom teaching and their instructional programmes. What then are the personality traits or characteristics of teacher - educators trained with Educational Technology at the M.Ed. level ? Identifying the personality traits at teacher - educators trained at the M.Ed. level with and without Educational Technology as an optional subject and teaching in the one year B.Ed. and four year B.A.B.Ed. courses of Shivaji University, Kolhapur, would help to plan designs to cultivate and develop these personality traits in the teacher educators through the teacher training progracesses.

METHOD OF RESEARCH :

The present study is descriptive by nature and therefore it is necessary to explain what descriptive research is. Descriptive research sometimes known as non experimental or correlational research deals with the relationships between variables the testing of hypothesis and the development of generalization, principles or theories that have universal validity. It is concerned with functional relationships. The expectation is that of variable A is systematically associated with variable B, prediction of future phenomena may be possible and the results may suggest additional or competing hypothesis to test. The major purpose of descriptive research is description of the state of affairs as it exists at present.

This method is defined by Best, J.W. (1963) as "Descriptive research describes and interprets what is. It is concerned with conditions or relationships that exist, practices that prevail beliefs, points of view or attitudes that are held, processes that are going on effects that are being felt, or trends that are developing".

Descriptive research also involves events that have directly taken place and may be related to a present condition. The method of descriptive research is particularly appropriate in the behavioral sciences because many of the types of behavior that interest the researcher cannot be arranged in a realistic setting. Introducing significant variables many be harmful or threatening to human subjects Ethical considerations often preclude exposing human subjects to harmful manipulation.

Although many experimental studies on human behavior can be appropriately carried out both in the laboratory and in the field the prevailing research method of the behavioral sciences is descriptive. Under the conditions that naturally occur in the home, the classroom the recreational centre, the office, or the factory, human behavior can be systematically examined and analysed.

The method of research utilized in descriptive research are survey methods of all kinds.

SURVEY METHOD :

The survey method is considered as one of the types of the descriptive studies. Best. J.W. (1963) defines it as 'The Survey Method' gathers data from a relatively large number of cases at a particular time. It is not concerned with characteristics of individuals as individuals. It is concerned with the generalized statistics that result when data are abstracted from a number of individual cases. It is essentially cross-sectional".

Populations may be small or large the survey research can work well by resorting to sampling practices. The survey is an important type of study. It must not be confused with the mere clerical routine of gathering and tabulating figures. It involves a clearly defined problem and definite objectives. It requires expert and imaginative planning, careful analysis, and interpretation of the data gathered and logical and skillful reporting of the findings.

Advantages of the Survey Method :

The following are the advantages of the survey method

1) Accumulation of information from individuals is possible at relatively low cost.

2) Generalizability to a larger population is more legitimate.

3) Unlike experimentation, surveys are flexible. Data is collected with the use of a variety of data collection tools.

4) Survey sensitize the researcher to potential problems that were originally unanticipated or unknown.

5) Surveys may be used as good tools for verifying theories.

6) It is more realistic than the experiment in that it investigates phenomena in their natural setting.

The following are the limitations of the survey method as seen by Gatting Johan (1969).

An attempt to over come them are discussed below.

1) The researcher has no control over individual response. Control was not required in the present study as the individuals perception was needed.

2) Problems of Verbal Vs non-verbal, manifest Vs. latent data are not pronounced in this study as the data was collected from an educated sample.

3) Statements about population from which sample are obtained are tentative. If it is well understood that any social study is reflection of a society at a particular time. In this study through a survey the personality traits of teacher educators was collected.

Sample :

The primary purpose of research is to discover

principles that have universal application but to study a whole population to arrive at generalizations would be inpracticable if not impossible. Some populations are so large that their characteristics can-not be measured. Before the measurment could be completed, the populations would have changed.

In conducting a reading experiment with the fifth standard children as subjects a number of difficulties may be encountered. The study of a population of the size would require the services of thousands of researches, the expenditure of hundred of rupees, hundreds of thousands of class hours.

Fortunately, the process of sampling makes it possible to draw valid inferences or generalizations on the basis of careful observation of variables with in a relatively small proportion of the population. A measured value based upon sample data is statistic. A population value inferred from statistics is a parameter.

A population is any group of individuals that have one or more characteristics in common that are of interest to the researcher. The population may be all the individuals of a particular type or a more restricted part of that group. All public school teachers, all male secondary school teachers, all elementary school teachers, or all kindergarten teachers may be populations.

A sample is a small proportion of a population selected for observation and analysis. By observing the characteristics of the population from which it is contrary to some popular opinion, samples are not selected haphazardly

they are chosen in a systematically random way. So that chance or the operation of probablity can be utilized.

The researcher has selected one type of samples for the research problem at hand.

The sample are as follows.

The population of the present study comprises of are teacher-educators teaching in the one year B.Ed and four year B.A.B.Ed., Colleges affiliated to Shivaji University, Kolhapur. There are 29 such colleges. Due to limitations of time it was not possible to conduct the study on the entire population, therefore a 20% random sample comprising of 20 teacher educators (10 male + 10 females) trained in the Department of Education, Shivaji University, Kolhapur at the M.Ed. level with Instructional Technology as the optional group and 20 teacher - educators (10 Males and 10 females) having any optional group other than Instructional Technology were randomly selected.

SAMPLE OF STUDY

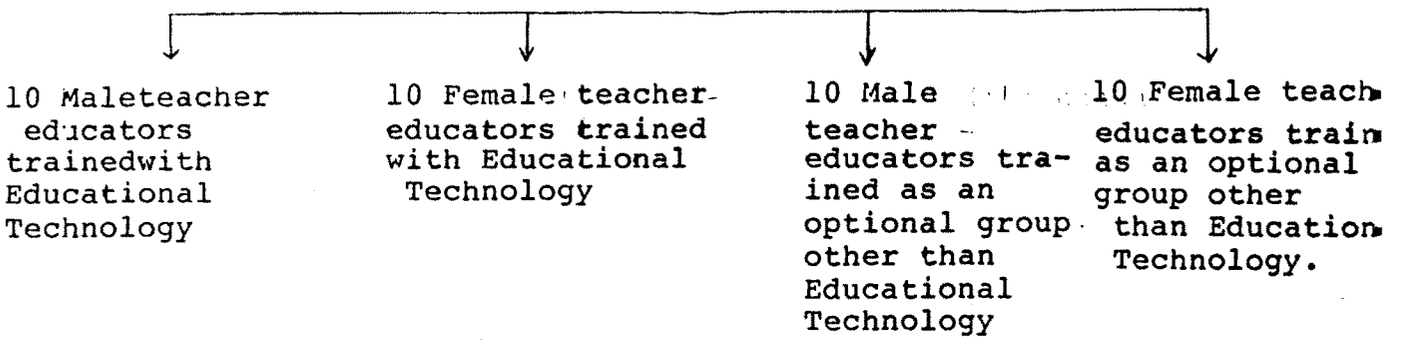

TABLE NO. 1

Distribution of Male Teacher Educators Trained with Educational Technology at M.Ed.level.

Sr. No.	Teacher Educators of	Teacher Educators No.		Age Group 25 to 30		31 to 35	
1.	B.A., B.Ed.	2	20%	01	10%	1	10%
2.	B.Ed.	8	80%	06	60%	2	20%
	Total	10	100%	07	70%	3	30%

Observation : In Table No.1 the characteristic of the male teacher-educators trained with Educational Technology at M.Ed. at M.Ed. level sample teaching 4 year B.A.B.Ed. course and one year B.Ed. course.

Interpretation : Two teacher-educators from B.A., B.Ed. course, one of them are in the age group 25 to 30 years and one is in the 31-35 age group. Eight teacher-educators from B.Ed. course, six of them are in the age group 26 to 30 years and two are in the 31-35 age groups.

Conclusion : There are 80% teacher-educators from B.Ed. course indicating B.Ed. teacher-educators are in the majority 60% of them are in the age group of 25-30 years.

TABLE NO. 2

Distribution of Female Teacher-Educators trained with Educational Technology at M.Ed. level.

Sr.No.	Teacher-Educators of	Teacher Educators No.		Age Group 25 to 30		31 to 35		35-4	
1.	B.A.B.Ed	--		--		--		--	
2.	B.Ed.	10	100%	8	80%	1	10%	1	1
	TOTAL	10	100%	8	80%	1	10%	1	1

Observation : In Table No. 2 the characteristics of the Female teacher-educators trained with Educational Technology at M.Ed. level sample - teaching one year B.Ed. course.

Interpretation : Ten teacher educators from B.Ed. course eight of them are in the age group 26 to 30 years. One of them are 31-35 age group and one of them are 35-40 age group.

Conclusion : There are all of 100% teacher-educators taken from B.Ed course. 80% of them are in the age group 25-30 years.

TABLE NO. 3

Distribution of Male Teacher Educators trained with other than Educational Technology as an optional at M.Ed. level.

Sr.No.	Teacher Educators	Teacher Educators No		Age Group 25-30		31 - 35	
1.	B.A.B.Ed.	3	30%	1	10%	2	20%
2.	B.Ed	7	70%	5	50%	2	20%
	TOTAl	10	100%	6	60%	4	40%

Observation : In Table No. 3 the characteristics of Male teacher-educators trained with other than Educational Technology as a optional subject at M.Ed. level. Sample - teaching four year Education course and one year B.Ed. course. Their distribution is yearwise and age-wise.

Interpretation : Three teacher-educators from B.A.B.Ed. course one of them are in age group 26 to 30 years and one is in the 31-35 age group. Seven teacher-educators from B.Ed course, five of them are in the age group 26 to 30 years and two are in the 31-35 age groups.

Conclusion : There are 70% teacher-educators taken from B.Ed course indicating B.Ed. teacher educators are in the majority. 50% of them are in the age group 25-30.

TABLE NO. 4

Distribution of Female Teacher Educators trained with other than Educational Technology as an optional at M.Ed. level.

Sr.No.	Teacher-Educators of	Teacher Educators No		Age Group 25 to 30		31 to 35	
1.	B.A.B.Ed.	5	50%	3	30%	2	20%
2.	B.Ed.	5	50%	2	20%	3	30%
	TOTAL	10	100%	5	50%	5	50%

Observation : In Table No. 4 the characteristics of the female Teacher-Educators trained with other than Educational Technology as a optional at M.Ed level. Sample - teaching four year Education course and one year B.Ed course. Their distribution is year wise and age wise.

Interpretation : Five teacher-educators from B.A.B.Ed course three of them are in the age group 25 to 30 years and two is thee 31 - 35 age group. Five teacher-educators from B.Ed course two of them are in the age group 25 to 30 years and three is in the 31 - 35 age groups.

Conclusion : There are 50% of teacher - educators from B.A.B.Ed and B.Ed course, 50% of them are in the age group 25 - 30 years.

TOOLS :

The following tools were used in this study :

The 16 Personality Factor Questionnaire.

Cattell's 16 Personality Factor Questionnaire :

A brief orientation to the 16 P.F. test -

The sixteen Personality Factor Questionnaire (16 P.F.) is an objectively scorable test devised by basic research in psychology to give the most complete coverage of personality possible in a brief time. The test was designed for the individuals aged sixteen and above. Forms A,B,C and D, are most appropriate for literate individuals whose educational level is roughly equivalent to that of the normal high school student. Two other forms of the test, E which is presently available, and F in preparation are designed for individuals with marked educational and reading deficits. The test can be scored by hand or by machine and various types of answer sheets are available for this reason.

A more intensive description of the scientific and statistical properties of the test is given in the Hand Book for the 16 P.F.

Comprehensive coverage of personality tests upon measurement of sixteen functional independent and

psychologically meaningful dimensions isolated and replicated in more than thirty years of factor analytic research on normal and clinical groups. The test user may need a little practice to get used to handlingas many as sixteen traits, but the expanded possibilities for understanding and predicting behaviour will more than compensate him for the effort involved.

The personality factors measured by the 16 P.F. are not just unique to the test but instead rest within the context of a general theory of personality. Nearly ten years of empirical, factor-analytic research preceded the first commercial publication of the test in 1949. For convenience these dimensions are set out briefly in Table No. 05.

These sixteen dimensions or scales are essentially independent. Any item in the test contributes to the score on one of only one factor so that no dependencies were introduced at the level of scale construction, moreover, the experimentally obtained correlations among the sixteen scales are generally quite small so that each scale provides some new piece of information about the person being tested.

The general theory of pesonality from which the 16 P.F. was developed, however, anticipated their demands along certain major dimensions. Thus, for example, related scales are available to measure primary source traits below the adult age, rang for which the 16 P.F. is intended special purpose tests have been devised to measure only one secondary trait, such as anxiety of extraversion, when the psychologists wishes to focus and intensify his measurment. In this fashion similarly the Clinical Analysis Questionnaire

TABLE No. 5

THE PRIMARY SOURCE TRAITS COVERED BY THE 16 PF TEST

Factor	Low Sten Score Description (1-3)	High Sten Score Description (8-10)
A	*Reserved*, detached, critical, aloof, stiff Sizothymia°	*Outgoing*, warmhearted, easygoing, participating Affectothymia
B	*Dull* Low intelligence	*Bright* High Intelligence
C	*Affected by feelings*, emotionally less stable, easily upset, changeable Lower ego strength	*Emotionally stable*, mature, faces reality, calm Higher ego strength
E	*Humble*, mild, easily led, docile, accommodating Submissiveness	*Assertive*, aggressive, competitive, stubborn Dominance
F	*Sober*, taciturn, serious Desurgency	*Happy-go-lucky*, enthusiastic Surgency
G	*Expedient*, disregards rules Weaker superego strength	*Conscientious*, persistent, moralistic, staid Stronger superego strength
H	*Shy*, timid, threat-sensitive Threctia	*Venturesome*, uninhibited, socially bold Parmia
I	*Tough-minded*, self-reliant, realistic Harria	*Tender-minded*, sensitive, clinging, overprotected Premsia
L	*Trusting*, accepting conditions Alaxia	*Suspicious*, hard to fool Protension
M	*Practical*, "down-to-earth" concerns Praxernia	*Imaginative*, bohemian, absent-minded Autia
N	*Forthright*, unpretentious, genuine but socially clumsy Artlessness	*Astute*, polished, socially aware Shrewdness
O	*Self-assured*, placid, secure, complacent, serene Untroubled adequacy	*Apprehensive*, self-reproaching, insecure, worrying, troubled Guilt proneness
Q_1	*Conservative*, respecting traditional ideas Conservativism of temperament	*Experimenting*, liberal, free-thinking Radicalism
Q_2	*Group dependent*, a "joiner" and sound follower Group adherence	*Self-sufficient*, resourceful, prefers own decisions Self-sufficiency
Q_3	*Undisciplined self-conflict*, lax, follows own urges, careless of social rules Low self-sentiment integration	*Controlled*, exacting will power, socially precise, compulsive, following self-image High strength of self-sentiment
Q_4	*Relaxed*, tranquil, torpid, unfrustrated, composed Low ergic tension	*Tense*, frustrated, driven, overwrought High ergic tension

°Titles in roman type are the technical names for the factors and are explained more fully in the *Handbook*.

was developed to augment the power of the 16 P.F. in clinical usage by adding 12 Scales, Sub - statically pathological in nature to the 16 normal scales.

Design and Construction of the Test :

Arrangement of Question :

Ten to thirteen items are provided for each scale in form 'A' and form 'B' In form 'C' and form 'D' there are eight item for the motivational distortion scale, and six items for each of the remaining scales. The questions are arranged in a roughly cyclic order determined by a plan to give maximum confidence in scoring by stencil and to ensure variety and interest for the examinee.

Method of Answering :

Three alternative answers are provided for each of the questions, since the two alternative "forced choice" situation forbidding any middle of the road compromise, tends to force a distorted distribution it may produce aversion to the test on the part of the examinee. This is particularly the case with adults to average or higher intelligence for whom forms A,B,C, and D are designed. With children, or with less intellignent, less competent or culturally deprived adults, a two choice design appears better. If such a design is used in the Law Liter Age Scales of the 16 P.F. constructed for such populations. (Form E and Form F).

Avoidance of Motivational Distortion Effects :

Questionnaires are often, justifiably considered susceptible to distorsion and deliberate taking test construction is aimed to minimize this, but it is also the

responsibility of the examiner to neutralize such tendencies as far as possible. It is important to develop good rapport, and to let the client see that the test can best contribute to his own benefit if he co-operates with frank reports. Actually items have been chosen to be as "neutral" in value as possible, to emphasize both desirable and undesirable aspects at both ends of each factor scale further more, items which are not "face valid" i.e. which donot obviously refer to the trait but which correlationally are known to measure it have been chosen wherever possible as a "built-in" protection against distorsion. In any case, this questionnaire problem is probably not so serious as its frequent discussion might seem to indicate, since the psychologist or counsellor is most likely to use the test in those situations where the client fully realizes that accurate results will contribute to his own welfore. If time is taken to make sure that the person tested understands the importance of careful and truthful response, a long step towards achieving good measures has been taken.

Application of forms of the test. The primary difference between forms 'A' and 'B' on the one hand and forms 'C' and 'D' on the other is the length of time needed for administration and the reading level required. Forms A or B requires 45 - 60 minutes where as form C or D had 25-35 minutes each. With a lower reading level as compared to form A or D.

Consistencies of the 16 P.F. :

The consistency in factor scores is quite good even over four-year interval. A substantial increase in

consistency is possible by using more than one form of the test.

Validities :

Substantial oveer all validity increase by using more than one form of the test. The test duct and induct estimates of validity are found to be experimentally high.

Having decided on the tools for data collection the procedure adopted for the study is elaborated.

PROCEDURE :

To study the personality traits of Educational Technology trained teacher educators and teacher educators trained other than educational technology as an optional, the teacher-educators will be drawn from the one year B.Ed. and four year B.A.B.Ed colleges affiliated to the Shivaji University, Kolhapur. The names of the colleges is given in Appendix 'A'.

A list containing the names of teacher educators teaching in one year B.Ed. course and four year B.A.B.Ed, course in Appendix B.

The teacher sample was administereed the Cattell's 16 P.F. Questionnaire which is a standardised tool to find out the personality factors of Educational Technology trained teacher-educators and teacher-educators trained other than Educational Technology as a optional subject from B.A.B.Ed and B.Ed. Colleges.

A copy of the 16 P.F. questionnaine is attached as Appendix 'C'. The copy of 16 P.F. questionnaire is translated into regional language (Marathi) in order to facilitate Marathi Medium teacher educators is attached to

Appendix 'D'. Those teachers who could not fill them and required time were provided a self adderssed envelop by the researcher and required to complete the same and return them by the first week of December 1994. Reminders had to be sent to ten teachers. By the end of March 1995 all the filled in questionnaires were received and ready for tabulation and analysis.

The 16 P.F. key (Appendix E) was placed on each answer sheet and the raw scores on each of the 16 P.F. for each teacher were tabulated with the help of the conversion table (Appendix F) the raw scores were converted into sten scores. The sten scores for the each of the Educational Technology trained teacher educators and the teacher-educators trained other than Educational Technology as an optional subject. Based on this information the personality factors of teacher educators trained with Educational Technology and those trained with optional subject other than Educational Technology at M.Ed. level were compared to find out how similar or different they were and whether a particular subject was characterised by particular personality traits?

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