

CHAPTER I

THE PROBLEM AND ITS SETTING

Definition of the Problem

The historian-philosopher, John Adams observed significantly that, "a teacher affects eternity; he can never tell where his influence stops." Ryans (1960) paraphrased :

For many teachers this is earnestly to be hoped; with regard to others it is a despairing thought. It seems reasonable to assume that good teachers - those who are skillful in developing understanding of the world in which man lives, insightful with respect to the ways and means of stimulating intellectual appetites, and capable of patience, understanding and sincere feeling for others - may pave the way for an enlightened society. Poor teaching, contrawise, would seem to be an insignificant contributor of its unfortunate share to perpetuation of ignorance, misunderstanding, and intellectual and cultural stagnation.

Therefore, for a continual growth and self-renewal competent teachers are a pre-requisite condition. The society may have, doubtless, excellent school buildings, it may also have excellent furniture, equipment, text-books and even an

effort may be made to design the curriculum in accordance with the societal needs and aspirations, all these sources and resources will run to seed and aridity if competent teachers are not available, or being available are not duly identified and encouraged.

One of the significant, perhaps the most significant, factor in the process of education is the personality of the teacher. This leads one directly to the question of the appropriate personal qualities in the teacher and his training. Frued was not far from correct when he wrote that "... the teacher works on material which is plastic and open to any impression and will have to keep before him the obligation of forming the young psyche not according to his own personal ideals but according to the state and mind and possibilities inseparably bound up with the child." A single teacher can and does promote or prevent and impede the development of hundreds of children. If a teacher, because of his own difficulties causes difficulties for his pupils, the resulting situation is hopeless: as the weaker antagonists, the children can hardly defend themselves against the inappropriate behaviour of the teacher. Again, the words the teacher uses, the concepts that are presented, and the information that is offered all act as a conditioned stimuli to hope or fear, the personality of the teacher must be recognized as the psychosocial determinant of academic achievement and personality development. Hence only the pertinent observation of Getzels and Jackson (1963), "the educational impact of an Ichabod Crane or a Mark Hopkins, of a Mr. Chips or a Socrates,

is surely not due solely to what he knows, or even to what he does but in a very real sense to what he is. There has always been a concern with the personal qualities of teachers, and recently this concern has become the basis for a growing body of research," (emphasis added).

The next few questions that immediately follow are : What kind of persons make a good teacher? Do effective teachers have certain traits, talents, attitudes or training in common? Or is there a certain pattern of behaviour that separates good teachers teaching the various subject specializations from the average or from the ineffective teachers? These pertinent questions assume added significance as all the would-be-teachers - whatever their personality configuration - are exposed to the same curricular offerings in a teachers' college.

These and other related questions have been discussed and studied by experts and laymen alike. In spite of the impressive number of studies conducted in this field within the last decade or so, no simple generalisations can be drawn at present about the characteristics of teachers and their behaviour patterns in the classroom (Barr, 1952; Mitzel, 1960; Ryans, 1960; Getzels & Jackson, 1963; Biddle & Ellena, 1964; Rosenshine, 1971; Gage & Winne, 1975). Vernon (1953) has added one more dimension to this uncertain state of the art by proclaiming that "perhaps the most suitable conclusion arising out of our discussion and survey of research is that teachers are as diverse in their psychological traits as any other

occupational group." However, it may be noted that the basic assumption underlying all the discussions and studies is that teachers are significant for student learning but the direct and conclusive evidence on this point is surprisingly meager. Obviously the complexity of the problem is enormous and conceptual and technical sophistication difficult to achieve.

A question of great relevance here again is whether the teacher's personality has been formed prior to or after having acquired some teaching experience. One authority suggests that after having taught for some time the teacher develops a somewhat aloof and dignified manner (Waller, 1932). On the other hand some believe that there are a few core characteristics of a teacher's personality which are probably less altered (Heddendorf, 1971). For some purposes, however, it would be more important to understand the personality characteristics that the student teacher brings with him to the profession. These would be more central to the core of the personality and probably less readily altered. Although studies have not clearly distinguished such a personality type, it has been suggested that the core personality of the beginning teacher stands in opposition to those characteristics he feels pressured to assume (Brookover, 1955). In this connection Ryans (1960) concludes in his well-known study Characteristics of Teachers, that "teacher behaviour is characterized by some degree of consistency." However, the important point to be stressed here is that the teacher's personal characteristics would appear to have their source in both his learned and

unlearned background. This needs further verification by investigating as to what personality characteristics would be common / different between the inservice teachers and student teachers and between teachers specializing in the teaching of various subjects.

There is no denying the fact that teacher attitudes - along with teacher personality, aptitudes, creativity, and interests - have long been the object of study of those interested in understanding teachers and in predicting teacher effectiveness. In persuing this particular line of enquiry, it is assumed either implicitly or explicitly that a teacher's personality, abilities, interests and attitudes will effect his behaviour and in turn make their mark on the pupil. Increased attention, it is emphasized, deserves to be devoted to the attitude changes during the preparation process, as well as those occuring after the completion of the professional training when the student teachers become fulfledged teachers as regular members of the profession. One strong plea of this approach is that, if one can measure such attributes as attitudes and creativity that are eventually related to teaching effectiveness, the measurements can be used to discriminate potentially creative and effective from potentially non-creative and ineffective teachers. But it may be pointed here that studies of non-cognitive factors of teacher behaviour still have not yielded consistent results. This may be due both to between - and within - subject variations and to the variety of measurement techniques used, (Allen, 1968;

Bledsoe and Crafton, 1968; Cook, LeBold and Linden, 1963; Linden and Kathryn, 1964).

In the light of what has been stated above on the unsettled status of the art, it would logically follow that teacher preparation and in-service education of teachers must operate on faith than on facts. Nevertheless, it would seem both necessary and desirable to study both in-service teachers and teachers in preparation in order to determine the presence and importance of some of the teacher characteristics like personality, attitude to teaching and creativity. It would also be worthwhile to study these characteristics not only of one group of teachers but teachers specializing in the teaching of various subject areas like Science, Arts and Commerce.

HYPOTHESES

In the light of the above discussion the purpose of this study is to test the hypotheses (1) that teaching in the different teaching fields of specialization, both for in-service and pre-service teachers calls for personality configuration, attitude to teaching and creative potential unique to each field and (2) that there are significant differences between in-service teachers and prospective student teachers belonging to respective teaching fields of specialization on measures of personality, attitude to teaching and creativity and (3) that when the scores derived from different measures used in (1) and (2) above are factor analysed different factors would characterize the various groups of teachers and student teachers. More specifically, an

attempt will be made to provide evidence relating to the few following questions :

PURPOSES

1. What are the pertinent personality factors of in-service teachers and are there any significant differences in the personality factors of in-service teachers belonging to different teaching fields, viz : Science, Arts and Commerce.
2. What are the pertinent personality factors of pre-service teachers and are there any significant differences in the personality factors of pre-service teachers belonging to different teaching fields : viz. Science, Arts and Commerce?
3. What is the attitude to teaching of the sample in-service teachers and are there any significant differences in attitude to teaching of the in-service teachers belonging to the three groups specified above?
4. What is the attitude to teaching of the sample pre-service teachers and are there any significant differences in attitude to teaching in the pre-service teachers belonging to three groups specified above?
5. What is the creativity potential of the sample in-service teachers and are there any significant differences between the in-service teachers of the various fields in the extent of creativity and the various factors that characterizes the creativity measure?

6. What is the creative potential of the sample pre-service teachers and are there any significant differences in the pre-service teachers of the various fields in the extent of creativity and the various factors that characterize the creativity measure?
7. Are there any significant differences between the in-service teachers and pre-service teachers of the various teaching fields on measures of personality, attitude to teaching and creativity?
2. 8. Are there some significant differences in and between the in-service and pre-service student teachers specializing in the teaching of different subjects when the scores derived from different measures used in the study are factor-analyzed.

Scope of the Study

The scope of the study was limited by the following considerations :

1. The study was limited to the High and Higher Secondary Schools of Ajmer District numbering eighteen for the in-service teachers.
2. The pre-service teachers were taken from the four teachers colleges of Ajmer : 1. Regional College of Education, 2. Government Teachers' Training College, 3. Jialal College of Education, 4. Gandhi Teachers' College, Gulabpura.
3. The study attempted to make a comparative study of the personality characteristics considered important for success in the three teaching fields at in-service and pre-service levels. It does not aim at clinical or diagnostic analysis of personality.

4. The following factors of personality have been considered in the study : (i) 16 Personality Factors of Cattell's Test, (ii) Attitude Towards Teaching, (iii) Creativity.
5. All the schools from which in-service teachers have been taken are affiliated for the examination purposes to the Board of Secondary Education, Ajmer, Rajasthan, and those of the institutions that are not Government schools but are run by private bodies are fully recognized by the Director of Education of the Government of Rajasthan. All the four Teachers' Training Colleges are affiliated to the University of Rajasthan, Jaipur.

Assumptions

1. The Sixteen Personality Factor Test constructed by Cattell and its Hindi translation by Kapoor (1967) is a valid and reliable tool in measuring the various dimensions of personality and in discriminating between various groups of inservice teachers and student teachers.
2. The Minnesota Teacher Attitude Inventory by Cook et al adapted by Verma (1964) is a valid and reliable instrument to measure the attitude towards teaching.
3. The creative potential instrument Something About Myself by Khatena (1971) and adapted by Raina (1975) is a valid and reliable psychometric tool in measuring the creative potential.
4. The sample inservice teachers and student teachers form a representative sample of a large population of inservice teachers and student teachers.

Personality and Its Measurement

"The personality of the teacher", write Getzels and Jackson (1963) "is a significant variable in the classroom." There has always been a concern with the personal qualities of the teacher and it has assumed more significance recently. The authors of the Education Commission (1966) remarked truly : "The destiny of India is now being shaped in her classrooms."

But one of the most notable features of personality has been the lack of agreement among the psychologists regarding the definition of personality which made Super (1949) to remark that "the field of personality is one of the most popular, challenging, important and confused in contemporary psychology." Psychologists have tried to define this term in keeping with their own understanding of human nature.

Allport (1937) listed some 50 meanings of the term personality and it is doubtful if the list is all inclusive. Since 1937 many more definitions have come to the force. The origin of the term personality can be traced to the Latin personare or a theatrical mask. Later it came to be applied to actors themselves.

An attempt, however, will be made below to define personality as an expression of various psychological interpretations of the term. Some are very broad and difficult to apply from a practical point of view, others are too narrow as to disregard all the factors involved.

Hall and Lindzey (1964) have provided a general definition of personality : "Personality consists concretely of a set of values or descriptive terms which are used to describe the individual being studied according to the variables or dimensions which occupy a central position within the particular theory utilized." Vernon understands personality from the point of the individual trying to emphasize his unique qualities or characteristics. "We mean by personality, simply, what sort of a person is so-and-so, what is he like.... While a man's intelligence, his bodily strength and skills are certainly part of his personality, yet the term refers chiefly to his emotional and social qualities, together with his drives, sentiments and interests" (Vernon, 1957).

Murphy advocates a Bio-social approach in the study of personality. He advocated that it is the interaction of the organism and the environment that should be the focus of study. He maintains that "a personality is a structured organism environment field, each aspects of which stands in dynamic relation to each other aspect. There is organization within the organism and organisation within the environment, but it is the cross organisation of the two that is investigated in personality research" Murphy (1947).

The definitions given above seem to have an agreement, expressed or implied, that the term personality envisions some sort of a dynamism and that it represents an interaction between inherited potentialities and environmental influences.

To those who consider personality in terms of traits or qualities and "needs" Traxler's and Murry's (1957) definitions have a significance and importance of their own.

For the purpose of this discussion (appraisal of personality qualities) personality will be defined as the sum total of an individual's behaviour in social situations. Behaviour includes not only overt acts but inward feeling tone produced by the situation as interpreted by the individual through introspection.

It is the psychoanalytic theory that characterizes Murray's views on the structure of personality. This concept has a reference to what Murray calls "need". Murray (1953) observes that "the term personality has been reserved for the hypothetical structure of the mind, the consistent establishments and processes of which are manifested over and over again in the internal and external proceedings which constitute a person's life. Thus personality is not a series of biographical facts but something more general and enduring that is inferred from the facts."

As against the above definitions, Cattell (1950) equated personality to the individual aspects of behaviour, and focussed his attention to all the behaviour of the individual and viewed that it should have a predictive power. Cattell's (1950) definition is : "Personality is that which permits a prediction of what a person will do in a given situation. The goal of psychological research in personality is thus to establish laws about what different people will do

in all kinds of social and general environmental situation...
Personality is concerned with all the behaviour of the
individual, both overt and under the skin."

In the light of the above, Cattell's definition will be an operational and a working definition of personality in this study. To this investigator it has some merit and seems to be most thorough going and the one which yields to rigorous measurement. Cattell in his Handbook (1976) presents the following justification :

"A first important property is the unusual comprehensiveness of coverage of personality dimensions. A second important feature is the orientation of the scales to the functional measurement. That is to say, the scales are not set up in terms of subjective or a priori concepts, but are directed to previously located natural personality structures related to the way personality actually develops. Thirdly, because it deals with such basic personality concepts, the measurement becomes increasingly related to an organized and integrated body of practical and theoretical knowledge in the clinical, educational, industrial and basic research fields."

Attitudes and their Measurement

There is no denying the fact that teachers play an important role in the life of their pupils. The teacher, it would be admitted, is an immediate personal symbol of the educational processes, a figure with whom students identify

and compare themselves. The educational impact of a teacher on his pupils is surely not *due* solely to what he knows or even what he does but to a great extent to what he is. Apart from his subject competence, more important probably are his attitudes, understanding of situations, in fact over all personality and so on. For teachers, it may be concluded, it is necessary that they have positive and favourable attitudes towards their work in the classroom and outside.

Determination of attitudes as well as its measurement in modern times is not only important for scientific study but for practical purposes also. Popular imagination painted that it was difficult for a person to understand other person's motives, thoughts, feelings and attitudes completely. It seemed as if an unbridgeable chasm separated man from man and this led "philosophers to ponder the ecocentric predicament of human race, the poets to lament the ultimate solitude of each soul" (Allport, 1937). But modern psychology has moved a considerable distance away from this "metaphysical solitude" and successful attempts have been made to understand the motives, thoughts and attitudes of men in quantifiable form.

But a lot of controversy surrounds the word attitude. Etymotogically, the word 'attitude' has been found to steam from the Latin word aptus which according to Allport (1950) "has on the one hand the significance of fitness" or 'adaptedness' and like its bye-form aptitude connotes a subjective or mental state of preparation for action." The

word attitude has been given more than one meaning and defined in various different ways.

It is important to note that the concept of attitude does not refer to one's single act or response but is based on a number of related acts or responses. "The acts or responses," writes Kundu (1975) "which refer to one's attitude are acquired and / or learnt." Attitudes are dormant or latent and, therefore, cannot be observed but can be deducted from statements, actions, responses etc. of an individual. The characteristics of attitudes can be determined from the definitions of attitudes. A few definitions are, therefore, in order.

A universally accepted definition of attitude covering multifarious attitudinal determinants is a vexed question. However, Thomas and Znaniecki (1928) write, "By attitude we understand a process of individual consciousness which determines real or possible activity of the individual counterpart of the social value, activity in whatever form, is the bond between them." Chave (1928) defined, "An attitude is a complex of feeling, desires, fears, convictions, prejudices or other tendencies that have given a set or readiness to act to a person because of varied experiences." Again Bogardus (1931) wrote that "An attitude is a tendency to act towards or against something in the environment which becomes thereby a positive or negative value." "Attitudes", writes Morgan (1934) "are literally mental pastures, guides of conduct to which each new experience is referred before a response is made."

Allport (1950) defined "An attitude is a mental and neural state of readiness organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related." Krech and Crutchfield (1948) defines an attitude as "an enduring organization of motivational, emotional, perceptual and cognitive processes with respect to some aspects of the individual's world." Campbell (1950) defined an attitude "As an individual's social attitude is an (enduring) syndrome of response consistency with regard to (a set of) social object."

Thurstone (1929) defines an attitude as the "sum total of a man's inclinations and feelings, prejudices or bias, preconceived notions, ideas, fears, threats and convictions about a specific topic. Thus a man's attitude about pacifism means here are that he feels and thinks about peace or war. It is admittedly a subjective and personal affair."

Needless to add here that opinions, since they "symbolise an attitude" are also used as means for measuring an attitude. However, doubt has been expressed on the fact that an opinion may not necessarily be a safe index of an attitude. Cattell (1953) observed that "Attitude measurements have depended too much upon purely verbal statements of opinions, etc. It should scarcely require a psychologist to find out that what a man says need not have much relationship to what he does, or even to what he says on another occasion."

On the face of it, it seems plausible, but a deeper reflection will show that more often than not, actions may also be distortions of a person's attitude. "A person", writes Brown, "may dislike peas, for example, yet when visiting a friend, he may eat with apparent relish." The conclusion is that if people wilfully distort their attitudes as expressed by their opinions, "we are measuring at least the attitude which they are trying to make people believe that they have." The subject's attitude, therefore, is to be taken by the acceptance or rejection of opinions.

DeCecco (1971) writes, "Attitudes refer to how we think, feel about, and act toward our fellow human beings and how they think, feel about, and act toward us. In short, we have attitudes about people, they have attitudes about us." This definition, it is obvious, stresses the integration of thought, feeling and deed. In more technical language it would mean that attitudes are "cognitive, affective, and behavioral." (DeCecco, 1971).

In conclusion it may be pointed out that in professional education attitudes have been defined as a "State of mental and emotional readiness to react to any educationally significant situation in the manner that gives first place to the interest of society and teaching profession, that demonstrates appreciation of the situation, educational implication and that indicates the ability and desire to co-operate with others toward the solution of the problem involved." (Cook, Leeds and Callis, 1951).

Hence in the present study, for all practical purposes the term "Attitude" has been used :

- (i) as a mental set towards teaching profession and the problems of education
- (ii) an ability to understand the complexity of the situation, and
- (iii) as the readiness to act towards the solution of the problem confronted in the teaching - learning process.

Creativity and its Measurement

The idea of creativity, highly important and suggestive, is both old and new. It is old in the sense that it was recognized as some mysterious and sacred power that was the exclusive possession of some rare geniuses. But there is now a growing recognition of creativity in a new form : "What is new in creativity is the growing realization, the emerging discovery, of the tremendous unexpected potentialities in the creativity of man, in the nature of human resources, in the meaning and respect for the individual" (Anderson, 1959).

Creativity has been defined in a number of ways by a number of people, but the psychologists have not come round to an unanimous decision so far. As long back as 1959, Bartlett employed the term of "adventurous thinking," which he characterized as "getting away from the main track, breaking out the mould, being open to experience, and permitting one thing to lead to another." Galann (1963) points to its

denotative versatility : Creativity is a normally distributed trait, an aptitude trait, an interpsychic and a style of life.

But the current psychological thought, by and large, emphasise novelty, effective surprise and originality, as the hallmark of creativity. If one were to combine and integrate the definitions of Israeli (1946), Drevedahl (1956), Stein (1962) and Kavolis (1964) it can be stated that creativity is the capacity of the individual to develop products or ideas essentially unique, and hence previously unknown both to the producer and to the audience; the creation should be definable in socio-cultural units and be accepted as satisfying, useful or tenable by a general consensus of people at some point in time.

Again, there are authorities who want to recognise not only social creativity but individual creativity as well, "the creativeness of the individual who makes for himself, something that others, unknown to him, have made before, as well as the creativeness of individuals who produce something new to society or the world (Taylor, 1964).

Guilford (1959) has reviewed aptitude traits that belong logically to creativity and have been discovered by factor analysis. The factors identified are : fluency, flexibility and originality of thinking, sensitivity to problems, redefinition and elaboration. These factors, by and large, are classifiable in a group of divergent thinking abilities. The divergent thinking abilities emphasise searching activities with freedom to go in different directions, whereas

convergent thinking abilities are the convergent thinking activities where one proceeds towards one answer or one that is more or less clearly demanded by the given information. In short, Guilford (1962) remarks that, "we might arbitrarily define creative thinking as divergent thinking but it would be incorrect to say that divergent thinking accounts for all the intellectual components of creative production."

In this connection it is important to note that there are some psychologists who emphasise the creative production than the creative process because the creative production catches the public gaze as it is in a tangible form. But this does not mean that creative process is less important because "one way to his final public product, the creative thinker arrives at numerous psychological products. In focussing attention on the final product, we overlook the numerous ideas that the inventor had and discarded. From the psychological point of view, these generated ideas also have many chances of being novel" (Guilford, 1962a).

Torrance (1962) had defined creativity as, "the process of sensing gaps or disturbing missing elements; forming hypotheses and communicating the results, possibly modifying and retesting the hypotheses." This definition is a broad one but the emphasis in the main is one the searching exploring aspects of the process of hypotheses - forming, testing and retesting and finally communicating the results.

The above brief discussion of some of important definitions need not discourage an investigator but he, however,

should be clear about what he means by the word. The investigators may as suggested by Taylor (1964) "choose tentatively an existing definition or develop a definition of their own that will enable them to move ahead in their work."

Therefore, until a complete taxonomy is achieved by different ways and means, by definition, "Creativity is reflected in the personality characteristics of the individual, in the way he thinks or the kind of thinking strategies he employs, and in the products that emerge as a result of his creative strivings" (Khatena, 1971). It is this definition of creativity that would be applicable to this investigation.

One of the most difficult problems in creativity research is that of measurement. The measurement is plagued by the fact that there are various criteria and creativity is not a unidimensional but a multi-dimensional phenomenon and therefore difficult to measure. Some investigators like Guilford and Torrance have developed cognitive tests - both verbal and nonverbal while others have tried to assess creativity by a resort to personality characteristics based on biographies (Cattell, 1963) and the application of personality tests (Mackinnon, 1975). Cattell and Butcher (1975) have written pointedly : "Although the modern study of creativity and personality rightly make use of and largely depends upon experiment, clinical observation, psychological testing, statistical analysis, follow up studies, and so forth, it would be foolish to neglect entirely the illuminating clues and

suggestions provided by historical and biographical studies."

The use of various autobiographical instruments as screening devices for giftedness has found support in the opinion and research of many in the field of creativity. Instruments in the form of checklists, questionnaires, and inventories calling for biographical data have been found to be an efficient way of identifying creative talent in general and creative scientific talent in particular (e.g. Taylor, 1958; Roe, 1963) and more recent studies using the biographical inventory technique to predict success in artistic, literary and scientific creativity confirm this view (Schaefer and Anatsi, 1968; Anastasi and Schaefer, 1969; Taylor, Ellison and Tucker, 1966; Schaefer, 1970 ab).

Educational significance

Gilbert Highet (1950) was abundantly correct when he observed that :

Teaching is not like inducing a chemical reaction : it is much more like painting a picture or making a piece of music, or on a lower level like planting a garden or writing a friendly letter. You must throw your heart into it, you must realize that it cannot be all done by formuleas, or you will spoil your work and your pupils and yourself.

In the light of the above remarks, it is perhaps justifiable to conclude that one of the most significant variables in the success of teaching, it is the personality of the teacher with his positive professional attitudes and

creativity that occupies the pivotal position in the teaching - learning interaction. "Indeed", write Getzels and Jackson (1963), "some would argue it, is the most significant variable."

But Vernon (1953), more than a quarter of a century back wrote that, "Teachers like mother-in-laws and Jews are the butt of music - hall jokes." This would, perhaps, mean that teachers have a peculiar personality type as is true in the case of other occupational groups. But research to date according to Vernon points to the inescapable conclusion that, "teachers are as diverse in their psychological traits as any other occupational group. It is, therefore, not only misleading but fallacious to consider teaching personality as something distinct and consistent." In spite of these observations there is enough evidence at hand, (Cattell, 1948), Lamke (1951), Cattell (1957), Hadley (1954), Barr (1961), Tarpey (1965), Start (1966), Kaul (1974) etc., etc., that demonstrates a relationship between some measures of personality and teaching effectiveness.

Upto the end of fifties, a great number of studies were made of teacher characteristics and teacher personality. Attempts were made to locate "good" teachers independently of external considerations. But such an attempt was not successful. Morsh (1954) summarized as early as 1954 the teacher aptitude research performed in the USA during the period 1900-52 concerning "prediction of teacher effectiveness." Dumas and Tiedeman (1950) listed 1,006 investigations in a bibliography concerning "teacher competence." Similarly

bibliographies have been written by Castetter et al (1954), Tomlinson (1955), and Watters (1954). Barr (1952, 1961) similarly made summaries in the Review of Educational Research for the period 1940 to 1961. In 1964 Biddle and Ellena published a further summary on this important topic of teacher effectiveness. The Encyclopedias of Educational Research (1950, 1960, 1969) are also of this nature. The issue was characteristically summarized by Mitzel (1960) when he wrote that "More than half a century of research effort has not yielded meaningful, measurable criteria around which the majority of the nation's educators can rally."

The crux of the deficiency in research on teaching was briefly and generally stated by Saadeh (1966) : "Teaching effectiveness, other than being taken as a static unitary concept, has been identified a priori with the teacher's personal qualities and his observable characteristics, or the social-emotional climate in the classroom, or verbal behaviour and strategies."

Therefore, there is an urgent need upon the qualitative preparation of teachers and it requires that an increased attention be devoted to the nature and types of personality and/or attitude changes that occur during the teacher preparation, as well as those occurring after the completion of professional training. Because the attitudes exhibited by teachers towards their students and towards teaching are recognized to be in part a reflection of their personality organisation, it would appear that increased effort should be

devoted over time to the enlargement and verification of evidence concerning non-cognitive characteristics of prospective as well as in-service teachers.

In this study the investigator hopes to demonstrate the similarities and dissimilarities in the personality structure of the sample pre-service and in-service teachers of Science, Arts and Commerce with the use of well-established research instruments and the result would provide the factor structure of the samples. It is envisioned that successful teaching in different teaching fields calls for personality configurations unique to each field. Morrison and McIntyre (1973) also affirm that among secondary school specialists, values, interests and abilities tend to reflect the subjects taught, student teachers of Science and English, for example, having attributes more in common with research scientists and novelists respectively than with one another. Therefore, a knowledge of personality configurations, attitudes and creativity might indicate, it is hoped, selection practices and also retention criteria and more importantly, the teacher/preparation curriculum itself.

Organization of the Balance of Study

Chapter II reviewed the past attempts to understand the work done and the studies conducted with regard to teacher personality more particularly those based on Cattell's Sixteen Personality Factor Test (16PF), Minnesota Teacher Attitude Inventory (MTAI) and a measure of creative potential - Something

About Myself (SAM) and other related studies regarding creativity of in-service teachers and student teachers.

Chapter III dealt with the description of the samples and the tools and techniques. Included in this Chapter was a description of the methods and the procedures used in collecting the data and the statistical techniques.

Chapter IV was concerned with the performance of the samples on Sixteen Personality Factor Test (Cattell), Attitude Towards Teaching and Creativity.

Chapter V dealt with an indepth study of the factor clusters of variables of the samples in various groups and combinations.

Chapter VI was concerned with summarizing, drawing conclusions, and presenting recommendations for further research.