CHAPTER - I

INTRODUCTION
I. INTRODUCTION

1.0 The Education Commission Report (Radhakrishnan, 1948) has very clearly laid down the following expectations regarding teachers and their roles: "The teacher occupies a very important place in the field of education. The success of educational process depends on the character and policy of teacher. The primary responsibility of the teacher is to arouse the interest of the pupil in the field of study for which he is responsible. He should so stimulate a spirit of inquiry and criticism that his pupils may acquire the habit of exercising independent and unbiased judgement. A good teacher desiring to achieve the results in the intellectual field, must instill into his pupils responsibility for right values and truth. He must inculcate habits and modes of behaviour through which their life may be moulded to their realization."
The quality of education is largely dependent on the quality of instruction teachers provide in the classroom. As such, one should pay proper attention to change the strategy of instruction and efforts should be made to introduce new methods and techniques to suit the needs of the hour. In our country innovations in teaching-learning process are gaining slow but steady grounds in schools and other educational institutions; slow because the world of teaching is more conservative as its values were established by a sector of society, wherein competition and growth were not essential for survival. The schools, colleges and universities do not generally adopt the same thrusting approach in their affairs as do business and industry. This may be why the teachers demand to see the value of new techniques and innovations like interaction analysis and micro-teaching before they prepare themselves to use them.

Teaching as conventionally understood by a traditional teacher, is the act of disseminating information to the learners in the classroom. Flanders (1951) says if one observes the traditional classroom teaching, one finds that either the teacher is delivering information or one of the students is reading from the text books. Burton (1950) defined teaching as "stimulation, guidance, direction
and encouragement of learning." The definition has four key words which need explanation: Stimulation, which means to cause motivation in the learner to learn new things, it is to create an urge to learn; direction means (teaching) directional or directed activity, which leads to pre-determined behaviour; guidance means to guide the learner to develop his capabilities, skills, attitudes and knowledge, to the maximum extent and encouragement which should be there to ensure maximum learning outcomes.

1.1 Teacher Effectiveness

Teaching is a moral enterprise. The teacher, whether he admits it or not is out to make the world a better place. His intention is to benefit others. So it is necessary to know how far he benefits society and how far he is effective in his deed. The Dictionary of Education (Good and Markel, 1959) defines teacher efficiency as "the degree of success of a teacher in promoting instructional and other duties specified in his contract and demanded by the nature of his position." Marsh and Wilder (1954), after reviewing research on teaching effectiveness, averred "that no single specific observable teacher act has yet been found whose frequency or per cent of occurrence is invariably and significantly correlated with student achievement."
The effective teacher is only an abstraction. Effectiveness stems from reasoned or value judgement. Teacher effectiveness is judged on the bases of goals of education. The teacher is effective only in so far as he facilitates the achievement of these goals. The term "teacher-effectiveness" will be used to refer to the results a teacher gets or to the amount of progress the pupils make towards some specified goals of education. Reviews of researches in teaching effectiveness are extensive and numerous (Barr, 1953; Barr, 1961; Davis and Satherly, 1959; Domas and Tiedman, 1950; Evars, 1961; Gage, 1963 and Medley and Mitzel, 1958) and have shown that there is no unanimity about the criteria of teacher success or effectiveness. Alexander and Halerson (1957) state that "it seems fair that teachers whom learners like best are those who have the best interaction with pupils and therefore have the potentiality for greater success in teaching." This assumption is supported by the findings of Hart (1964), Costs et al (1972) and Koul (1972). It has been said that the central problem in understanding teacher effectiveness is establishing relationships between teacher behaviours and teacher effects (Ryans, 1969, p.2). Ryans (1969) feels that teaching is effective to the extent that the teacher acts in a way that is favourable to the development of basic skills, acquiring desirable attitudes,
value judgements and adequate personal adjustment of the pupil.

Effective teachers are those who contribute to the growth of pupils. Education is designed to develop in the pupils certain knowledges, skills, attitudes and appreciations. Teacher effectiveness criteria are frequently classified on the basis of methodology used in obtaining the criterion measurements.

To know the effectiveness of the teachers, some researchers used rating scales using different sources of judgements resulting in student ratings, principal's ratings, peer ratings and supervisor's ratings or administrator's ratings. But later these ratings were used less frequently, because they did not correlate with each others' ratings and they also did not take into consideration the actual classroom interaction.

Teaching effectiveness criteria is classified according to goal proximity as presage, process and product criteria. The product criteria depend upon a set of goals towards which teaching is directed (Mitzel, 1960, p.1894). These goals are stated in terms of behavioural changes on the part of students which may be in terms of achievement,
attitude or adjustment. Remmers (1950) presented the arguments for assessing teaching competency in the light of effects on students. These effects are variously called student gains or student growth or student outcome, all referring to the product variable.

The presage or input variable relates to the teacher or pupil characteristics which play a role in the teaching-learning process. According to this criterion, measures of teacher's intellectual ability, grades made in college, personal appearance, test scores and ratings usually made outside the classroom are used to measure teacher effectiveness.

The process criteria is one which is connected to the process of teaching. Needless to say that it is related to teacher behaviour. This is measured in the classroom in terms of conditions, climates or typical situations involving the social interaction of students and teacher. According to this criterion, observation of both teacher behaviour and student behaviour is used to measure teacher effectiveness.

The bulk of studies on teacher effectiveness produced negative results as teacher behaviour was not taken into
consideration till the 1930's. It was only with the studies of Anderson (1937), Lippit and White (1938), Withall (1949) and Flanders (1951), that serious efforts were made at studying teacher behaviour.

1.2 Classroom Interaction

One of the important innovations in classroom teaching is the analysis of classroom interaction between teacher and students. This technique of analysing teaching behaviour has been evolved to improve classroom teaching. It also provides insight into the nature of the classroom communication and helps in modifying teachers' behaviour.

1.2.1 Nature

We may think that teaching is an influencing or directing activity in which a teacher tries to influence the student, represented, in a group or as an individual. No doubt teaching is influence-directed (Chauhan, 1979, p.139) activity, but it is not only a one way process. It is a two way process, wherein both teacher and student influence each other. Teacher influences the student by giving directions, expressing his ideas, lecturing, clarifying the difficulties of students and questioning, whereas students ask questions, participate during the discussion, ask doubts and in addition, use non-verbal
communication consciously or unconsciously. The teacher also used non-verbal communication.

1.2.2 Meaning

According to Flanders (1960) classroom interaction may be defined as "any system for coding spontaneous verbal communication, arranging data into a useful display, and then analysing the results in order to study pattern of teaching and learning." A particular system for interaction analysis usually includes:

i. set of categories each defined clearly,

ii. procedure for observation and a set of ground rules for coding,

iii. tabulation of data gathered, and

iv. method of interpretation.

1.3 Flanders' (1960) Assumptions of Classroom Interaction Analysis

1. For more than 60% of the time one would hear some talking in a classroom.

2. Verbal behaviours can be observed with higher reliability than most non-verbal behaviour and also it can reasonably serve as an adequate sample of the total behaviour in the classroom.
3. The teacher exerts a great deal of influence on the pupils' behaviour. Pupil behaviour is affected to a great extent by the type of teacher behaviour.

4. The relation between students and teachers is a crucial factor in teaching process.

5. A good social climate in the classroom affects learning positively.

6. Children tend to be conscious of a warm acceptance by the teacher, and to express greatest fondness for the democratic teacher (Perkins, 1950).

7. Role of classroom climate is crucial for learning.

8. Minimizing the defects in teaching-learning process, through research is possible.

9. Changing classroom behaviour through feedback is possible.

Earlier to Flanders, Withall (1949) had developed and used a seven category scale to quantify teacher behaviour as "teacher-centered" and "pupil-centered." The teacher-centered behaviour favours the dominant role of the teacher in the classroom, whereas pupil-centered approach favours the freedom for pupils to participate
and express their view in classroom teaching. Flanders (1960) defines teacher behaviour as "those acts of teacher which occur in the contest of classroom interaction." He developed a ten category system to observe teacher verbal behaviour in the classroom. It is popularly known as Flanders' Interaction Analysis Category System (FIACS). Flanders (1961) termed teacher behaviour as "indirect" and "direct" behaviour. Indirect teacher behaviour expands the freedom of the pupils to participate in the class; teacher accepts feelings and ideas of the pupils, praises and encourages them to express their feelings. There will be a warm and congenial atmosphere in the classroom whereas direct teacher behaviour is signified by giving directions, lecturing and criticising the pupils which leaves very little scope for pupils to participate in the discussion. FIACS can be used to assess the socio-emotional climate of the classroom.

Similar to the Flanders' (1960) "direct" versus "indirect" teacher behaviour or teaching style, some investigators worked to search for other teaching styles. After attempting to describe teacher behaviour (teaching style), attempts were made to relate teacher behaviour to pupil growth outcome which is a criterion of teacher-effectiveness.
1.4 Process-Product Study

An important change in research in teacher effectiveness became apparent with Mitzel's (1960) "presage", "process" and "product" criteria of teacher effectiveness. At about the same time the chapter on systematic observation in the first Handbook of Research on Teaching Gage, 1963) gave visibility to an important development in measurement, the introduction of "low inference" observation schedules as an alternative to rating scales for the measurement of teacher performance. It also called attention to a way of studying teacher effectiveness that came to be called "process-product research", which correlated measures of teacher performance (process criteria) with measures of teacher effectiveness (product criteria). Process-product research differed from earlier research in teacher effectiveness in two important respects. First, the variables being studied were defined much more explicitly than in earlier studies and secondly, they were measured more objectively.

1.4.1 Teacher Behaviour and Pupil Growth Outcome

The research on teacher effectiveness in the recent past has yielded a growing number of conclusions between reasonably well defined teacher behaviours and pupil outcomes, usually measured in the form of achievement test scores.
Dunkin and Biddle (1974) in their exhaustive review identified four flaws of earlier research: (i) failure to observe teaching activity, (ii) theoretical impoverishment, (iii) use of inadequate criteria of effectiveness and (iv) lack of concern for contextual effects. Early research studies (Alexander, 1970; Becher, 1975; Coats, 1970; Flanders, 1964, 70; Frust, 1970; Hunter, 1968; Lashier, 1963; Penny, 1961; Powell, 1968; Samph, 1974; Soar, 1966; Webber, 1968) revealed that teacher indirect behaviour to be positively related to pupil achievement. In India also the process-product studies (Lulla, 1974; Padma, 1974; Pavanasham, 1974; Rokha, 1976; Shaida, 1976; Sheelawant and Deshpande, 1981; Sharma, 1972) have revealed that indirect teacher influence is more effective than direct teacher influence.

Some of the investigators on the other hand have reported no relation or negative relationship with teacher indirect influence and pupil attainment (Allen, 1970; Cook, 1967; Flanders, 1968; Rosenshine and Furst, 1976; Snider, 1968; Soar, 1971; Thompson and Bowers, 1968; Torrance, 1968). Rosenshine and Furst (1976), after reviewing studies in the area of teacher behaviour, concluded that increased teacher indirectness is unrelated to pupil achievement but added that criticism is found to be negatively associated with
pupil achievement. Soar (1963) found that greater use of lecturing is associated with greater achievement of pupils with low socio-economic background.

In India studies of Sharma (1972), Shaida (1976) and Padma (1976) have revealed that narrow questioning with feedback was found to be positively and significantly associated with pupil achievement with respect to knowledge and understanding objective. In a recent study, Sayed (1986) found that students showed a preference for teachers who were more direct.

A second set of studies relating learning environment to pupil achievement have revealed the following. The learning environment observed in the more effective teachers' classrooms (according to these studies) differed from the learning environment observed in less effective teachers' classrooms in the following ways. The pupils were more orderly, the teacher was less permissive and spent less time "managing" the class, and the pupils received more praise and fewer rebukes. Brophy's (1979) comment that teachers who are more effective instructors tend also to be more effective managers is consistent with these results. From the studies of Brophy and Good (1979), Gage (1978), Madly (1977) and Rosenshine (1976) consistent
useful findings have emerged. It can be concluded that more effective teachers used pupil time differently than less effective teachers. The more effective teachers' pupils spent more time in academic activities and more time organised in a single large group with the teacher in charge; they spent less time in small autonomous groups or working as individuals (seat work), and when they were doing seat work, pupils of more effective teachers were supervised more closely. The above teacher behaviours bear a strong resemblance to direct teacher behaviour as they curb pupil freedom by providing a highly structured situation. The studies indicate that direct teacher behaviour may be positively related to pupil achievement.

1.5 Student Personality and Achievement

Another important factor affecting pupil achievement is that of personality variables. Analysis of educational achievement in terms of its predictors has been increasing as a focal point of research activity. Some attempts have been successful in establishing a direct relationship between certain variables and academic performance. During the past two decades there have been fervent research to probe into variables other than intelligence which might determine achievement. These variables may be grouped as under:

(ii) Personality variables including all its facets, types, traits, attitudes and interests (Child, 1964; Cortines, 1963; Demos and Spolyer, 1961; Elliott, 1972; Eysenck, 1957; Lynn and Gordon, 1961; Mohan, 1972 and Savage, 1961). Quite a few investigations have reported certain definite trends, facilitating or interfering, between some personality traits and academic achievement. The results indicate trends but fail to be conclusive and non-controversial. A general tendency has been to relate a major type of personality to academic achievement rather than to discover a relationship between a number of personality traits and academic attainment. Eysenck (1957) developed a personality theory providing a major landmark in this approach. Since the formulation of his two dimensional approach to personality - Extraversion/Introversion and Neuroticism, many attempts have been made in assessing the relationship of extraversion/introversion and neuroticism to academic attainment. Bending (1957) and Eysenck (1963) while not denying the existence of other factors in addition to neuroticism and...
extraversion contend that these two factors contribute to a description of personality more than any other set of factors in the non-cognitive field. It is contended that neuroticism and extraversion affect academic achievement, but findings concerning direction and magnitude of their influence are not consistent. Elliott (1972), Eysenck (1957), Eysenck and Cookson (1969), Honess and Kline (1972), Lynn (1959), Lynn and Gordon (1961) and Savage (1961) have reported that stable introverts (low neurotic/low extraverts) performed better in educational tasks.

Another group of studies those of Entwistle and Cunningham (1968), Entwistle and Walsch (1969) and Eysenck and Cookson (1969), Savage (1966) have reported that both extraversion and neuroticism are negatively associated with academic achievement of pupils. Indian studies of Basu (1968), Mohan (1973) and Srivastava (1980) also revealed similar results. However, some of the investigators have reported that neuroticism to be negatively associated and extraversion to be positively associated with achievement (Elliott, 1970; Husain, 1976; Orme, 1970; Rushton, 1966; Vohra, 1981). Another group of researchers have reported neuroticism to be negatively associated and extraversion unrelated to academic success (Brar, 1972; Davison, 1958; Eysenck, 1961; Gupta, 1971; Levin, 1958; and Mohan, 1968).
1.6 Aptitude Treatment Interaction (ATI)

Till recently, the objective was to arrive at superior teaching methods. It has been realised that such an attempt would be simplistic in design as in a class, students differ in various ways. Hence the search for superior methods should be supplemented by attempts at matching instructional styles to different types of learners. This would mean that efforts should be made to match teacher style/instructional method to learner characteristics. The problem then is to locate interactions of individual differences among learners with instructional treatments. Studies which seek to determine the relationship between aptitude (individual differences among learners) and treatment (instructional treatments) are called as Aptitude x Treatment Interaction Studies (ATI studies). Aptitude variables are usually pupil personality, adjustments, study habits and intelligence. The treatment variables are also known as process variables - the types or the styles of teacher behaviour.

ATI research resulted from Cronbach's early and insightful plea for an end to the search for simple solutions to the complex problem of teaching effectiveness (Cronbach, 1957). Cronbach urged that the quest for the effective style or method or technique should be upgraded. Berliner and
Cohen (1973) phrased it as follows: "Given this set of learner characteristics, what is the best way to tailor instruction for this particular type of learner? Teaching in this light requires one to consider simultaneously a host of learner characteristics, insight into one's own knowledge and skills, awareness of the material to be taught and the learning environment in which the teaching is to occur. The added complexity of ATI has been formidable and lead Cronbach and Snow (1977, p.492) to state flatly that "no aptitude treatment interactions are so well confirmed that they can be used directly as guides to instruction."

1.6.1 Aptitude x Treatment Interaction based research studies

An increased interest in ATI studies have been shown by researches during 1960s and 70s. The aptitude variables studied have been student personalities (extraversion, neuroticism, manifest anxiety and achievement orientation). The treatment variables referring to teaching styles of teachers have been the following: Flanders's (1970) "direct" versus "indirect", Rim's (1967) "blame" versus "praise", Domino's (1970) "conforming" versus "independent" manner, Dowaliby and Schumar's (1970) "teacher centred" versus "student-centred" approach and Peterson's (1976) "high structure/low participation" versus "low structure/high
participation" manner all of which are closely related to one another. All the studies revealed significant ATI effects. For example, Katharki and Deshpande (1984) found that low neurotic pupils learnt better under indirect teacher influence whereas high neurotic pupils learnt better under direct teacher influence.

1.7 Need of the Study

One of the main concerns of educational process is to realise the objectives of education and the attainment of the same to the maximum extent. Educational attainment mainly depends upon teacher classroom behaviour or teaching style of a teacher, pupil's personality factors, intelligence and socio-economic status of pupils as well as environmental factors. Teacher behaviour affects pupil achievement. A number of process-product studies have reported that indirect teacher behaviour is positively associated with pupil academic achievement (both in India and in western countries). Other more recent studies have reported direct teacher influence (stating teachers' own opinions or ideas, directing pupil action, lecturing) to be more effective at least for younger, lower socio-economic status students and for the teaching of science and mathematics. Amidon and Flanders (1961) have reported that increased indirectness was unrelated to academic
attainment of average pupils. Rosenshine and Furst (1976) after reviewing the studies in the area of teacher behaviour have reported that increased indirectness is unrelated to pupil achievement but added that criticism is found to be negatively associated with pupil achievement. Soar (1968) has revealed that greater use of lecturing (where the factual knowledge was to be imparted) was found to be positively associated with achievement of the pupils with low socio-economic status. Some of the Indian studies have also revealed that teacher influence leaning towards direct behaviour helped pupil to achieve more. The studies of Sharma (1972), Padma (1976), Shaida (1976) have revealed that narrow questioning with feed-back to be positively associated with pupil achievement with respect to knowledge and understanding objectives. Thus from the above discussion it is clear that the relationship between teacher behaviour and pupil achievement is not consistent although a sizeable amount of research has been undertaken. Another consideration in the context of the relationship between teacher behaviour and pupil achievement is pupil background. Generally in India, pupils expect the teacher to take the initiative and are dependent on the teacher to a great extent. This expectation is more pronounced in semi-urban and rural regions. Therefore, in the context of findings of direct teacher behaviour being more effective in the
case of students belonging to low socio-economic status and of rural areas as well as the lack of consistent results, the investigator was interested in studying teacher behaviour and pupil achievement. Moreover, the investigator felt it was necessary to examine the above relationship, specially in view of the fact that pupil personality will also be considered.

A second aspect is the relationship between personality variables and academic achievement. Medley's structure of teacher effectiveness (Mitzel, 1983, p.1899) deals with five major types of variables as criteria for evaluating teachers. Four additional type of variables that affect the outcomes of teaching indirectly and that are not controlled by the teacher were also defined. One such variable was the individual pupil characteristics which are the characteristics of a pupil that determine what learning outcomes result from any particular learning experience that the pupil might have. Two pupils will be affected differently by identical learning experiences because they differ in ability, interests, values, personality and so on. Eysenck (1957) identified four dimensions of personality, namely Extraversion/Introversion, Neuroticism, Psychoticism and Intelligence. He further reported that extraversion and neuroticism, which are the
internal context of pupils in the Madley paradigm, affect academic achievement. Although a great deal of research relating Extraversion and Neuroticism and achievement has been carried out, yet consistent results have not been obtained (for e.g. Davison, 1962; Elliott, 1970; Eysenck, 1957; Eysenck and Cookson, 1961; Levin, 1962; Mohan, 1968 and Rushton, 1966).

Hence, the investigator was interested in determining the relationship between pupil personality (extraversion and neuroticism) and achievement.

Another previously mentioned concept, aptitude treatment interaction effect, has gained recognition as a fruitful area of research (Cronbach and Snow, 1976). It has been the experience of most of the teachers including the investigator, and educationists that neither teacher behaviour nor pupil personality acts in isolation. This is to say there will always be an interaction between teacher behaviour and pupil personality which in turn affects pupil achievement.

Most of the aptitude treatment interaction studies carried out in the western countries have revealed that the interactive effect of pupil aptitude variables like manifest anxiety, achievement orientation, extraversion and neuroticism
on the one hand and treatment variables of teacher behaviour or teaching styles like direct and indirect, blame and praise, teacher-centred and student-centred, conforming manner and independent manner, high structure/low participation and low structure/high participation on the other, affect academic achievement of pupils (Domino, 1970; Dowalihy and Schumer, 1970; Katharki and Deshpande, 1984; Peterson, 1976; Rim, 1967). To the investigator's knowledge there have been very few studies at the doctoral level on ATI effects, in India.

To sum up the investigator felt that there was a need to take up a study relating teacher behaviour, pupil personality and pupil growth outcome on the following counts:

i. Inconsistency among the findings regarding the relationship between teacher behaviour and pupil achievement as also the lack of consistent relationships between pupil personality and achievement, and

ii. Paucity of studies in the area of Aptitude x Treatment interactions in India. A third reason was the investigator's interest in this area of research, who as a classroom teacher had noticed the ATI effects and the casual attempts of adjustments made by his colleagues and himself to
accommodate for the individual learning styles or just the personalities of pupils. These attempts sometimes were successful, sometimes not. Hence the investigator felt that there was a need to investigate the problem.

1.8 Statement of the Problem

Relationship between teacher behaviour, pupil personality and pupil growth outcome.

1.9 Objectives

1. To find out the effect of teacher classroom behaviour upon pupil growth outcome (pupil achievement).

2. To find out the relationship between pupil personality of extraversion and pupil growth outcome (academic achievement).

3. To find out the relationship between pupil personality of neuroticism and pupil growth outcome (academic achievement).

4. To find out the interactive effect of teacher behaviour and pupil personality on pupil growth outcome (academic achievement).

5. To construct and validate achievement tests in parallel form on a unit in Science-I for IX Standard.
6. To adopt and validate the group test of intelligence for pupils of 11+ to 14+ years.

7. To translate Hindi version of Junior Personality Inventory into Kannada and validate the same.

8. To prepare and standardise the lesson plans on the basis of Flanders direct and indirect teaching strategies.

1.10 Overview of the thesis

In this chapter, the relationship between the concepts of teacher effectiveness and teacher behaviour, the relationship between process and product variables, the aptitude treatment interaction effects, the need for the present study, the statement of the problem and the objectives of the study were spelt out. In the next chapter, a review of related studies would be made. The third chapter deals with the methodology employed in the study. The analyses of the data and a discussion of the results obtained would be presented in the fourth chapter. In the fifth and final chapter a summary including the findings, conclusions, limitations, implications and suggestions for further research would be presented.