REVIEW OF RELATED LITERATURE

Research in the area of classroom interaction and
teacher behaviour has been going on for a little over three
decades now. A perusal of the steady research endeavour in
this area enables one to identify certain prominent
features which are characteristic of the growth process of
any new thought.

There have been some studies like those of
Hopkins (1941), Lewin (1948), Wright et al. (1951) and
Bovard and Everett (1951) which served to identify the
'classroom climate' and its pervasive nature as the
context of teaching-learning task.

Studies as those of Anderson (1939), Lewin,
Lippitt and White (1939), Withall (1949) and Flanders
(1965) served to highlight the prevalence of distinctly
contrasting climates in the classroom.

Alongside, there have been studies like those of Cantor (1951), Flanders (1951), Perkins (1950) and many others which emphasised the need for a conducive climate for effective learning and called for a type of classroom behaviour on the part of the teacher as would nurture such a climate.

TOWARDS A THEORY OF SOCIAL EMOTIONAL
CLIMATE IN THE CLASSROOM

(a) Classroom Climate

There is a widely accepted principle that living in a society which places high premium on cooperation and mutuality of purpose requires a kind of school experience for children which emphasise these values. This has generally been taken to mean that school situations, especially in the classrooms, must be modelled along democratic principles. Hence, this general position has important implications for teaching method.

It was in connection with this point of view that Hopkins (1941) developed his theory of democratic interaction. The idea is that the classroom situation should be pervaded by an atmosphere of democratic interaction.

The classroom situation has been variously described by various authors. It is sometimes called classroom climate, sometimes classroom dynamics and sometimes classroom interpersonal relations.

The concept of climate or psychological atmosphere has been used by a number of researchers in the area of psychology and education, like Lippitt (1943) and Anderson (1939). Lewin (1948), Prescott (1938) and Rogers (1967), for example, made considerable use of the concept. However, no clear-cut definition of the concept can be cited and for the purpose of more effective communication and clearer understanding of the notion a definition of the term "social -emotional climate" can be attempted.

Climate may be considered to represent the emotional tone which is a concomitant of interpersonal interaction. It is a general emotional factor which appears to be present in interactions occuring between individuals in face-to-face groups. It seems to have some relationship to the degree of acceptance expressed by members of a group regarding each other's needs or goals.

The phrase 'classroom climate' refers to the generalized attitudes toward the teacher and the class that the pupils share in common in spite of individual differences. These attitudes emerge out of and thus owe their origin to, the classroom social interaction. Through participation in classroom activities, pupils develop soon some common expectations regarding the teacher behaviour and their collective attitude towards their own class. These expectations influence the social atmosphere of climate that appears to be distinctly existent and fairly

stable, once established. In this way, the phrase 'class-room climate' is merely a shorthand reference to those qualities that consistently predominate in most teacher-pupil contacts. Thus, study of teacher behaviour through classroom interaction analysis becomes a study of classroom climate as well. (Flanders, 1970)

The classroom situation partakes of the nature of a group situation. The principles of interaction/the class-room are nearly the same as those for an effective inter-action amongst the members of any organized group.

Lewin (1948) uses the concept of group dynamics in his discussions in the context of his exploration of group life and of interpersonal relations.

The term classroom dynamics is just a semantic embellishment of the concept of classroom interaction.

Classroom interaction analysis can be described as a technique for capturing quantitative and sequential (and hence, qualitative) dimensions of teacher-student verbal behaviour in the classroom. As an instrument, however, it does not measure everything that occurs in the classroom. Interaction analysis has a perspective in its design of capturing the dynamics of the classroom. Interaction analysis is concerned with the verbal communication between the teacher and the students, that is directly related to the social-emotional climate of the classroom.

It may be pertinent here to recall that interaction analysis
as a technique was developed by Flanders out of social
psychological theory and was designed to test the effect
of social-emotional climate of the classroom communication
on student attitudes and learning.

(b) Classroom Events in a Social Milieu

Wright et al. (1951) established that 70 per cent
of classroom episodes in the school day of a boy involved
the interaction, in some way or another, with one or more
persons thus emphasising the importance of classroom
situation in the development of social attitudes and
behaviour.

Bovard and Everett (1951) state that "the social
interaction in the classroom will influence the individual
student's perception, feelings, and interpersonal
relations and even his personality development.

Classroom teaching, per se, is a social inter-
action. The acts of teaching evoke reciprocal contacts
between the teacher and the students, and it is this inter-
change itself which is termed as teaching.

Social climate, or the atmosphere for learning
that obtains in any given classroom, is a function, in
part at least, of the individual teacher.

(c) Interpersonal Relations

Research of the fifties has shown that learning, in both. its qualitative and quantitative aspects, is related to the kinds of personal relations which obtain in the classroom. There are two important dimensions involved in such relations. One is the degree of rapport that exists between the teacher and students; and the other is the nature of the relations among the students themselves at least as manifest in the classroom.

It is now well established that good personal relations in the classroom depend on the ability of the teacher to relate in some wholesome fashion to students, accepting them emotionally and being capable of understanding and appreciating their problems and aspirations.

It is also becoming increasingly evident that a good climate for learning in the classroom depends on the type of the social relations among the students. It appears that acceptance of a student by his teacher is a necessary but not a sufficient condition for his adjustment in the classroom and hence for his learning. The student must also gain a reasonable degree of acceptance from his peers.

(d) The Contrasting Climates

The work of Prescott (1938) and his associates has been a valuable stimulus towards recognizing the emotional

facets of the learning process. Mostly in the context of studies on teacher effectiveness and the like, research efforts in this area are being pursued. The ball was set rolling by Anderson when he wrote his article, "The Measurement of Domination and of Socially Integrative Behaviour in Teachers' Contacts with Children" in 1939 (Anderson, 1939).

During the course of extended observations of teachers, Anderson and his colleagues rated their subjects on several scales. He termed one of these as "socially integrative behaviour" which is used in a context that makes his operational definitions directly applicable to the development of this investigation. 'Socially integrative behaviour' is the term applied to responses characterized by flexibility, to behaviour which seems to bring out differences in others and to find common purposes among differences (Anderson, 1943). He also listed examples of "dominative" behaviour (1939). Dominative and socially integrative contacts express in action the nature of the teacher-pupil and pupil-pupil relationships in the classroom. However, for the purpose of this analysis, both terms are applied only to the description of teacher's classroom behaviour.

Integrative contacts are operationally defined as those in which the teacher (i) seeks to explore and arouse the interests of the child and (ii) accepts the child as it

is. The child is in the situation; he has given some
indication of interest or desire. This type of contact is
that indicating the closest rapprochement of child and
teacher (Anderson et al., 1946).

Some of the more specific indicators of integrative
behaviour are occasions on which the teacher (i) extends
invitation (as opposed to use of order or pressure, or
command), (ii) helps the child to advance or refine a
problem, (iii) offers approval and (iv) admits own
responsibility, ignorance, or incapacity (Anderson, 1946).

Dominative techniques are termed by Anderson
(1939) as an attempt at atomistic living where the desires,
purposes, standards, values, judgment, welfare of others
do not count. In other words, dominative contacts are
those in which the teacher acts in a somewhat rigid, even
compulsive manner. He tries to make others act in
accordance with his own relatively unalterable designs or
values. He attacks the personal integration of his pupils,
employing shame, force, commands, and threats. He is
unwilling to permit the pupils' goals or desires or
purposes to contribute to the determination of orientation
or class goals (Anderson, 1939).

He and his associates (1939, 1946), studying the
reactions evoked by the type of teacher contacts with
students in the classroom situation found that

'integrative' approach on the part of the teachers aided
pupils' spontaneity, initiative, voluntary social
contribution and so on while, on the contrary, 'dominative'
teacher contacts were associated with pupils' proneness
for easy distraction from school work and blind compliance
to teacher directions. In fact, Anderson's ideas and
basic categories of integration and domination are, in a
significant way,the forerunners of Flanders' concepts of
indirect and direct teacher influence.

Anderson (1939) says that domination is the
behaviour of a person who is inflexible, rigid, determini-
stic, who disregards the desires or judgment of others,
who himself in the conflict of differences has the answers.
Examples are the use of force, commands, threats, shame,
blame, attacks against the personal status of another.
Domination is the technique of autocracy or dictatorship;
it obstructs the growth processes in others. It is the
antithesis of the scientific attitude and the open mind.

The term integrative behaviour to him means the
type of behaviour leading to a oneness or commonness of
purpose among differences. It is the behaviour of a
flexible growing person who is looking for new meanings,
greater understandings in his contacts with others. It is
non-coercive; it is the expression of one who attempts to
understand others, who is open to new data. It is
consistent with the scientific approach, the open mind.

It is both an expression of growth in the person using it and a stimulus to growth in others. It does not stifle differences; it makes the most of differences; it actually creates new and harmonious differences. No behaviour is entirely integrative; none short of extermination is entirely dominative, but in the interplay of differences specific acts or contacts can be reliably said to be expressions of domination or of integrative behaviour.

In short, integrative teacher behaviour was that which expanded the children's opportunities for self-directive and cooperative behaviour with the teacher and their peers while dominative teacher behaviour tended to restrict children's activities and to lead to distracted, aggressive, non-cooperative conduct. Anderson had evidence to prove that children's behaviours were consistent with the kind of personality the teacher displayed in the classroom. It is he who brought out evidence that sustains the hypothesis that the main direction of the influence in the classroom is from the teacher to the pupil. Also it was given to him to demonstrate for the first time that reliable patterns of teacher and pupil behaviour lend themselves to be categorized and captured through observation of their overt behaviours.

The autocratic-democratic dichotomy presented by Lewin, Lippitt and White (1939) was another precursor of Flanders' concepts. They report the results of an

intensive study of the effects of leader behaviour on children's groups. Their research discusses, however, findings on group climate obtaining in a setting other than the formal classroom situation, but the inherent hypotheses are intrinsically the same as those tested by Anderson.

They established that social climate is related to productivity and to the quality of interpersonal relations and proved that democratic atmosphere tends to keep work at a relatively high level even in the absence of the leader.

Withall (1949) was, perhaps, the first of the early researchers of classroom climate to measure classroom interaction by means of a category system that classified teacher verbal statements. The categories developed by Flanders (1965) are in many ways similar to those used by Withall. From the work of Withall came further support that classroom climate could be assessed and described by means of a category system.

Withall (1949) showed that a simple classification of the teacher's verbal statements into seven categories produced an index of teacher behaviour almost identical to the integrative-dominative (I-D) ratio of Anderson et al. (1946). Flanders (1951) created laboratory situations in which contrasting patterns of teacher behaviour were exposed to one pupil at a time. A sustained dominative

pattern was consistently disliked by pupils, reduced their ability to recall, later on, the material studied, and produced disruptive anxiety as indicated by galvanic skin response and changes in the heartbeat rates. Pupil reactions to integrative contacts showed these trends reversed. Perkins (1951), using Withall's technique, found that greater learning about child growth and development occurred when group discussion was free to focus on that topic; groups with an integrative type of leader were able to do this more frequently than were groups led by a dominative type of leader. In a large cross-sectional study, Cogan (1956) administered a single paper-and-pencil instrument containing three scales to 987 eighth-grade students in 33 classrooms.

Cogan found that students reported doing more assigned and extra schoolwork when they perceived the teacher's behaviour as falling into the integrative pattern rather than the dominative pattern.

Withall yet later (1951) spotlights 'learner-centred' climate in contradistinction to 'teacher-centred' climate through his seven-category "climate index" to measure it.

Flanders (1965) says that the "indirect" influence stimulates student talk while on the other hand, the "direct" influence tends to increase teacher participation

and place restraints on students' behaviour and would thus stimulate compliance.

(e) <u>Climate and Learning</u>

Studies by Anderson, Lewin, Withall and Flanders serve to highlight the two distinctly contrasting aspects of teacher behaviour. Subsequent research as evidenced by what follows, points to the possibility of capturing classroom communication and also calls for a permissive and favourable teacher influence in the classroom such that it leads to effective learning by pupils.

Flanders (1967) discusses study of the ideas of others and relates these ideas to the theory underlying his category system for assessing the social-emotional climate of the classroom.

Cantor (1951) elaborating on the advantages of student-centred approach to teaching urges that the teacher should focus his service 'to' the student and not 'on' the student.

Flanders (1951) has demonstrated that students in general are more concerned with the problems of adjusting to the teacher than with the problem of learning and achieving. He states that learning proceeds only when the relationship has been demonstrated to carry little or no threat to the students. He says that in a teacher-centred classroom there is more student hostility towards

themselves, other students or the teachers, more tendency
to withdrawal, more apathy, aggressiveness or even emotional
disintegration.

Jenkins (1951) agreeing with Perkins (1951),
believes that greater learning takes place depending on the
pupil getting his emotional needs satisfied.

McKeachy (1951) says that maximum learning results
from a reduction of anxiety, channels for which could be
provided through constructive learning activities. He
feels that there is greater interaction and spontaneity in
the group-centred class.

Glidewell (1951) finds that a denial of feelings
by the leader was accompanied by a reduction of leader
effectiveness while the acceptance of feeling led to an
increase in his effectiveness.

Singletary (1951) diagnoses as one of the
difficulties in teacher-pupil relationship the lack of
understanding of each other's values and motives.

Perhaps, one of the most significant findings in
this realm has been that by Bills (1952) to the effect that
student-centred and non-directive teaching, analogous to
client-centred psychotherapy, rather than the traditional
lecture-discussion method was found to be of personal
value and an aid to the students in their problems of

adjustment.

According to Perkins (1950) children tend to be conscious of a warm acceptance by the teacher and to express greatest fondness for the democratic teacher. To him, again, the role of classroom climate is crucial to the learning process.

Haggerty (1932) says that the relation between the teacher and students is a crucial factor in the teaching process and must be considered an important aspect of methodology.

Johns (1968) revealed that indirect teacher influence results in a greater incidence of thought-provoking questions by students and is also more problem-solving in its orientation.

Leathers (1968) found that shorter the interval between the que-stimulus and reinforcement better the learning would be.

Maccia (1965) in the course of her attempt to descriptively theorize about instruction speaks about the need for two specific bases for effective influence to be exerted. She describes them as content basis and motivational basis. Interaction analysis and sociograms offer, she concedes, limited possibilities with respect to observing the motivational basis. It should be clear that

Maccia's 'motivational basis' of influence in the classroom is nothing but the social-emotional climate that is generated by and is sought to be measured through the type of teacher verbal behaviour in the classroom.

The contribution of Cogan (1956) to the development of a conceptual framework of teacher behaviour is slightly different from others in that Cogan did not directly observe the behaviours of teachers and students, but instead, analyzed the perceptions that students had of their teachers. He was able to conceptualize teacher as 'inclusive, preclusive or conjunctive'.

He showed that there is a relationship between the way that a teacher is perceived by his students and the amount of self-initiated work that the pupils report doing. Cogan's work also naturally, helped Flanders later to develop a theoretical basis for conceptualizing the relationship between teacher influence and the behaviour and attitude of pupils.

Most of the researchers cited have their own favourite words to describe what essentially are the same behaviour patterns. They were for Anderson et al. "dominative vs. integrative"; for Lippitt and White "authoritarian vs. Laissez-faire"; for Withall, Flanders and Perkins "teacher-centred vs. student-centred" and for Cogan "preclusive vs. inclusive".

Flanders later has introduced his nomenclatures,
"direct vs. indirect" teacher behaviour.

Altogether these various research studies reviewed
while providing a basis for a theory of social-emotional
climate in the classroom, clearly identify the two teacher
behaviour patterns that create the contrasting classroom
climates.

Their results, however, should be interpreted with
caution. They do not suggest that there is a single pattern
of teacher behaviour that should be continually maintained
in the classroom. Anyone with teaching experience recognizes
that there are situations in which an integrative teacher
behaviour pattern is less appropriate than a dominative
pattern; furthermore, it is possible that identical acts by
the teacher may in one situation be perceived by pupils as
dominative and in another situation as integrative. These
research results do show that, over a period of time,
integrative rather than dominative teacher-pupil contacts
will establish desirable pupil attitudes and superior
patterns of work. The work of Anderson et al. and Cogan
present evidence that a desirable climate results in
more learning, although additional evidence is needed to
confirm the conclusion.

According to Flanders,

...there are times when direct influence is
most appropriate and other times when
indirect influence is most appropriate. At
first glance, this assumption may appear to
conflict with the findings of research on
classroom climate. However, a careful study
of the data collected indicates that in all
types of classroom situations, both direct
and indirect influence occurred. A wide-
spread misinterpretation of research on
classroom climate has been that direct
influence should be avoided in the classroom.
(Flanders, 1967, p. 115)

Flanders, in the course of his 'Introduction' to
the book 'Interaction Analysis - Theory, Research and
Application' by Amidon - Hough (ed) (1967) says that the
concepts, "integrative - dominative", "democratic -
authoritarian", "student-centred - teacher-centred" and
"indirect - direct", all spring from a conviction that
most teachers could be more effective if they would
interact with pupils rather than direct them. This sounds
innocuous enough, but a disposition to prove one relation-
ship can hide others. A small step toward a broader view,
away from a single-value orientation, can be found in
the introduction to the concept of "flexibility of
teacher influence". This movement towards a more
objective description of teaching behaviour has not yet
run its course. He believes that the balance between
"initiating" and "responding" to be found in both teacher
and pupil statements will become a focus for further
research.

The unequivocal evidence emanating from the studies cited above establishes the crucial role of classroom interaction between the teacher and the pupils as also amongst the pupils themselves and serves to point out how the classroom behaviour of the teacher plays a significantly decisive role therein. The research findings relating to the prevalence of two contrasting climates and the empirical evidence relating to positive association between a conducive classroom climate and pupil learning prompted researchers to undertake studies leading to the exploration of interaction process and teacher behaviour in the classroom and the identification of several variables affecting what came to be described as teacher effectiveness.

Such attempts as those of Amidon et al.(1967), Pankratz (1967), Flanders (1961), Morrison (1966), Buch and Santhanam (1971) and many others may be cited in the context.

INTERACTION ANALYSIS PROCEDURES AND RESEARCH ON TEACHING PATTERNS

Teaching is, in fact, more than talking. But the disconcerting reality in the normal classroom is that the predominant instructional behaviour of the teacher is 'talk'. Indeed, more than 80 per cent of the classroom instructional time is found spent in talk either by the teacher or by the pupils. This ubiquitous 'talk' is a

fait accompli.

There are several systems and techniques used for recording and analysing the spontaneous classroom verbal (and also non-verbal) behaviour of teachers and students and research on classroom climate and its effect on students has widely used these techniques.

Amidon and Flanders (1967) describe such a system wherein they also show that the system allows observers and teachers to explain, summarise, analyse and draw inferences about teaching from data gathered by using the systems.

It is essential that an observation system, in order to be useful to researchers and teachers alike, must not only yield useful data but must be also reliable and easily learned. Flanders, in his paper (1960), describes some successfully practised techniques for training reliable classroom observers and lays down a procedure for estimating inter-observer reliability.

The paper by Furst and Amidon (1967) describes the verbal behaviour patterns used by elementary school teachers. The authors report the types of variation in the verbal behaviour patterns that were typical of elementary teachers at various grade levels.

The basic premise of interaction analysis is the belief that the teachers' classroom verbal behaviour

creates a particular type of social-emotional climate in the classroom which has a direct effect on the attitude and behaviour of pupils. This leads one to the question whether there exists any relationship between teacher verbal behaviour and teaching effectiveness. While seeking answer to the question one is driven to seek definition and the determining criteria of effective teaching.

Perhaps, two types of criteria which may be termed as external and internal are typical. The external criteria refer to judgments of teaching effectiveness made by those not directly involved in the classroom as, for example, principals and supervisors as they rate teachers. The internal criteria refer to behaviours, reactions and perceptions of those directly involved in the classroom situation, as, for example, pupil rating of teachers and pupil achievement.

The extent to which and the accuracy with which principals and supervisors would be able to evaluate teacher behaviour are moot questions. The paper by Robbins (1967) presents evidence that principals can with some degree of accuracy characterize the teaching styles of members of their faculty. His work is of much use in the validation of the external criteria often used in studies of teacher effectiveness.

The paper by Amidon and Giammatteo (1967)

presents evidence to support the contention that verbal behaviour patterns of superior teachers can be identified and that these patterns do differ markedly from the verbal patterns of other teachers.

Pankratz (1967) reports a study of teacher effectiveness that used both external and internal criteria. Physics teachers in his study identified as "above average" on three criterion measures (principal rating, student rating, and a test designed to predict teaching effectiveness) differed in their use of verbal teaching behaviour from another group of Physics teachers rated as "below average" on the same variables. The behaviour of the "above average" Physics teachers could have been predicted from the theory presented in the preceding section. The results of the study thus lends support to the theory.

Amidon and Flanders (1961) report a study wherein the achievement of junior high school students in mathematics was the criterion measure of teacher effectiveness. The results of this study are consistent with theory. The value of the research is greatly raised by the inclusion of two additional variables, a dimension of individual differences of students as measured by a test of dependence proneness and a curriculum variable of clear and unclear instructional goals.

Flanders (1964) in his paper reports the results

of a series of studies designed to test hypotheses which
he presented in his paper written earlier but published
later (1967). He finds evidence to support the hypothesis
that students of teachers who use a teaching style that is
both indirect and flexible have more positive attitude
towards school and their teacher and achieve more than
students of teachers who use a more direct teaching style.

Soar (1967) probes the relationship of the
verbal behaviour of elementary school teachers with the
reading achievement of their students. The data, only in
part, supported hypotheses generated from theory. The
results, therefore, serve as a reminder to teachers and
teacher educators that teacher classroom behaviour as
measured by interaction analysis provides data on only a
portion of the variables which constitute effective
teaching.

These various studies present evidence to support
the contention that classroom climate can be objectively
and reliably measured and that such climate is related to
teaching effectiveness.

(a) <u>Process - Product Research</u>

Concluding his review of literature studying the
relationships between teacher characteristics and pupil
growth Gage (1965) selects five global characteristics
which are warmth, cognitive organization, orderliness,

indirectness and problem-solving ability.

Mitzel (1960) draws clear lines of distinction between 'presage', 'process' and 'product' criteria of teacher effectiveness. To illustrate the point, teacher's trait of 'warmth towards pupils', which exists even 'before' the teaching 'process' begins, is a 'presage' criterion. The corresponding 'process' variable would be some behaviourally specified measure of warm acts in the course of teaching. The 'product' variable, in this connection, would be an educational outcome such as more learning or some measure of pupil attitude logically related to the teacher warmth.

Morrison (1966) found evidence supportive of Flanders' (1965) findings with respect to process criterion (use of pupils' ideas) and product criterion (pupil attitudes and achievement).

Lashier (1965), Nelson (1964), Johns (1966), Dodl (1966) and Parakh (1965) also have conducted studies which are supportive of Flanders' (1965) findings.

Cogan (1963) found statistically significant support for the same process - product relationship as did Flanders (1965), with data from a questionnaire administered to 987 junior high school pupils in 33 classes.

Miller (1964) created controlled experimental

treatments on responsive-directive dimensions and found
that students in the classes of responsive teachers had
significantly more positive attitudes and used significant-
ly higher levels of thinking than was the case with pupils
in classes under opposite treatment.

The work of Bales and Strodbeck (1951) stand out
significant. They extensively used interaction process
analysis as a research technique on small groups. Their
endeavour was directed towards uncovering the relationship
between the behaviour of group members and the productivity
of groups. Most of the theoretical principles discussed
by them bear direct application to the study of classroom
climate. The focus of their study is on a system of
interaction process analysis which they used to determine
and analyse processes in group problem-solving.

Nipper (1966) reports confirmatory evidence to
the discovery by Leathers (1968) when he found that an
immediate reinforcement of the desired behaviour results
in an increased probability of recurrence of that
behaviour.

Bloom and Wilensky (1967) using their four-
category scale established that the ratio of "feedback"
to "response elicitation" is directly related to the
likelihood of learning.

There are, however, three studies which failed

to provide evidence supportive of the notion that teacher's acceptance and use of pupil ideas is related to product variables. They are of Snider (1965), Guggenheim (1961) and Hoover (1963).

Research attempts to investigate the relationships between the use of teachers' praise statements, a type of teacher behaviour which is usually believed to be positively correlated with the use of pupil ideas and opinions, and its effect on product variables, include those by Reed (1961, 1962) and Dollins and others (1960). While the former found that there is positive correlation between certain types of teacher behaviour like warmth etc., as perceived by the pupils, and "pupil" interest in science the latter discovered that more praise by teacher helped pupil adjustment, but did not affect arithmetic achievement.

Coats (1966) pursued his investigations with respect to both relationships between pupils' attitude and achievement scores versus various measures derived from Flanders' 10 x 10 matrix and process-product relationships. He carried out further investigation in the former; based his analyses on the 62 classes reported by Flanders (1965); and found an overall correlation of +0.53, which, according to Flanders and Simon (1969) represents the highest prediction coefficient of process-product variables involving achievement and pupil attitude scores. In the

case of the second phase of Coats' (1966) investigations concerning process-product relationships, predictors included several variables which either represent or are correlated with the teacher's tendency to make use of pupils' ideas and opinions. With regard to achievement, the process variables combined to show a correlation of +0.45.

A careful perusal of research linking process and product variables suggests that not only a predominant teacher talk behaviour characterizes the classroom communication patterns of teachers in general, but also that pupils' verbal communication is primarily in response to the initiative of teacher. Hughes (1959), Travers and others (1961) and Flanders (1965) report consistent results in this regard that teacher talk on the average is between 65 and 75 per cent of the time. The concern caused by this ubiquitous teacher talk is that pupils' initiative and independent thinking are not encouraged in the classroom.

(b) Presage - Process Research

Research linking presage to process variables concerns itself with comparing some aspect(s) of the teaching process with something that existed before the teaching process started.

Efforts in this direction can be perceived from two angles - (1) those studies which discuss relationships

between teacher traits like for example teacher personality
or teacher perception measures and some process variables
of teaching behaviour and (ii) these studies involving
some kind of training experience of pre-service or inservice
teachers and process variables.

The works of Davies (1961), Ringness and others
(1964), Wilk and Edson (1963), Simon (1966) and Smith
(1965) are of pioneering nature with respect to the first
kind of studies while those by Gage (1963,b), Bowers and
Soar (1961), Soar (1966), Flanders and others (1963) and
particularly the study by Allen and others (1966) shed
useful light on the relationships of the second type.

Buch and Santhanam (1971) exploring the role of
sex of the teacher as factor of teacher classroom behaviour
found that male and female teachers differed significantly
in respect of (i) their capacity to generate student talk,
(ii) their questioning ratio and (iii) their content
emphasis. Concluding their review of research in the area
of presage-process variables Flanders and Simon (1969) say
that progress in this area is beset with a difficulty - the
difficulty of relating teacher traits to performance
variables. The heartening side of the picture is stated by
them to be the promise held by some training experiences in
terms of a foundation upon which new and more effective
pre-service and inservice programmes like 'micro-teaching'

can be built. They may also include simulating teacher-
pupil interaction, quasi-simulated micro-teaching programmes
and so on. There is, therefore, reason for optimism in
this direction, they say.

OTHER STUDIES

There have been some attempts at linking teacher
classroom behaviour with the curricular subject taught.
Buch and Santhanam (1970 a,b) studied the predominant
patterns of classroom behaviour of teachers teaching
English while the same authors (1972) studied teacher's
initiation-response balance in different subject matter
areas.

Some studies are reported which sought to
administer inservice and pre-service programmes involving
the use of interaction analysis technique with the
objective of modifying teacher behaviour. The work of
Flanders (1963, 1964), Storlie (1967), Moskovitz (1967),
Zahn (1967), Kirk (1967), Hough and Amidon (1967), Furst
(1967), Hough and Richard (1967), Lohman et al. (1967),
Hough (1967) and Zahorik (1968) provide evidence to support
the thesis that training in interaction analysis has a
decisive effect on the modification of teacher behaviour.

The ultimate need for developing strategies of
effective teaching is highlighted by the work of Santhanam
(1971) who sought to develop some means of augmenting

'creative inquiry' in the classroom.

Studies of the presage-process type linking variables relating to the teacher and some criteria of teacher classroom behaviour have been markedly few since the studies of this type mostly sought only to link, as cited earlier, some kinds of training experience on the part of teachers and process variables. The few studies that attempted to explore some non-personality variables relating to teachers like their bio-factors were pursued with reference to teacher effectiveness.

Ryans reviewing the research linking sone non-personality variables relating to teacher with teacher effectiveness comments as follows:

> ......Age of the teacher and amount of teach-
> ing experience seem to manifest an overall
> negative relationship with teaching effective-
> ness.......sex differences in teacher
> effectiveness do not appear to be pronounced
> among elementary teachers although at the
> secondary level it appears that women as a
> group may be more effective than men as a
> group on specified criterion dimensions.....
> for teachers of all levels considered
> together, there seems to be little difference
> in special dimensions of teacher behaviour
> between single and married teachers; within
> the elementary level the evidence somewhat
> favours married teachers; at the secondary
> level unmarried teachers as a group appear
> to be superior with respect to criterion
> measures which relate to systematic,
> responsible teacher classroom behaviour.....
> subject taught (with some exceptions) appears
> to bear very little relation to the abstract-
> ed criterion..... (Ryans, 1958, p.1490)

The research reviewed by Ryans, as quoted above, has evidently been pursued with reference to teacher effectiveness or some particular dimensions thereof as defined and described by the individual researchers. In fact, the problem of defining and describing the criteria of teacher effectiveness led to the formation of a Committee headed by Barr (1952, 1953) which went into the question.

CONCLUSION

The review of studies in the area of teacher behaviour clearly indicates that though considerable work has been done in the area of teaching effectiveness and classroom climate not very many studies have been undertaken in the area of teacher behaviour. The pioneering work has been done, among others, by Anderson (1939), Lewin et al. (1939), Hopkins (1941), Lewin (1948), Withall (1949), Wright et al. (1951), Bovard and Everett (1951) and Flanders (1960). Among the areas covered are democratic interaction, group dynamics, social interaction and interpersonal relations, most of them having an orientation towards classroom situation and also the two contrasting climates in the classroom, one enlarging and the other restricting freedom to the pupils for participation in the classroom communication.

The aim of research on teacher behaviour should

help an educator to devise ways and means of modifying
teacher behaviour. If this is to be achieved it is
necessary that inquiries are undertaken about the
correlates of teacher behaviour. The present review
indicates that some of the variables studied with reference
to teacher effectiveness are some of the demographic
variables about the teacher like age, sex, etc. and a
large number of personality variables. Recent thinking
further points to the need for more sustained research on
the climates prevailing in the school, teachers' and
principals' role perceptions etc. This latter category of
variables can be considered as institutional variables.

Any further study in the area of teacher behaviour
should aim at finding out the relationship between some of
the above-mentioned variables and teacher influence. The
present study will, therefore, aim at the relationship
between the teacher influence and some of the variables
as mentioned earlier in Chapter I, page 34 with a view
to throwing into light the dynamics of classroom phenomena.

The next chapter discusses the actual problem
taken, the plan and procedure followed.