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3.0 INTRODUCTION

Every class will have its own uniqueness. Observation of a few classes offers such a wide variety of happenings that there is perhaps no other human group that has so much variety, so profound in its effects on its members. All that we can do is to find out and study the various factors that go to make up classroom climate and how or what changes do we see in their interplay causing variations in every class.

The first question that arises is what is classroom climate? What are the sociological, psychological and philosophical foundations of classroom climate? Is classroom climate a global concept or is it a divisible concept? Can the components of climate be described? And if they are described, what are the sub-components on which the tests can be based? These are the questions that are discussed in the chapter. It is attempted in this study to find out the relation of classroom climate with academic motivation and academic performance. A various question arise: What are the basic components of pupils' academic motivation? In the present chapter, an attempt is made to study this in details in order to arrive at the problem and in order to plan the procedure of the study.

3.1 CONCEPTUAL BACKGROUND OF CLASSROOM CLIMATE

(a) The Term "Classroom Climate"

Classroom climate is an environment to which the participants respond. It is the outcome of vast multiplicity of factors. It can be referred to as the environmental conditions that tend to produce an emotional interaction between the teacher-pupil and pupil-pupil during the teaching-learning process. It is the prime concern of the school to provide for its pupils exhilerating environment which could evoke multiplex interest in the pupils. When a child is under the constant influence of good work and good thoughts there grows in him a tendency to become good. When the climate of the class is equivocal and of disapproval, and group members have no assurance regarding the satisfaction of their needs and desires, they would feel fearful and insecure. If the climate is not healthy, high standards of performance could not be maintained, ultimately it would result into open conflicts and cause discipline problems.

The classroom climate is a compound where various elements meet and form a new compound which has very different qualities and which cannot be separated. The classroom climate is not like a mixture. The teachers' behaviour create various reactions on the minds of the pupils. The behaviour is of two types. In one type the

teacher teaches the curriculum but the teacher also addresses the pupils, give them feedback, accepts feelings or ideas, etc. This is called a "latent curriculum". The latent curriculum contributes a lot in the formation of classroom climate. It will be interesting to note the components of the classroom climate from the pupils' point of view and from the teachers' point of view.

(b) Definitions of Classroom Climate

In this age of supra-industrial revolution, all people who are concerned with education, have given more emphasis to the study of "classroom climate". The literature on classroom is continuously pouring in and many eminent researchers have attempted to define the concept of classroom climate. The literature available enables one to speculate into core of the subject - "The concept of classroom climate". It also empowers one to understand the dimensions and significance of the concept. Classroom climate is too comprehensive a concept to be reduced to a few words only. Its components are interlinked and overlapping just as many traits make up the personality of an individual, many factors go to make up the classroom climate. A few researchers on the basis of their observations and studies, have attempted to define the concept of classroom climate.

Flanders (1970) views the climate of the class as

the generalized attitudes towards teacher and the class that pupils share despite individual differences. He states "the word climate is merely a shorthand reference to those qualities which consistently predominate in most teacher-pupil contacts and pupil-pupil contacts in the presence or absence of the teacher".

This means that the interrelations of the teacher and the pupils are the main factors that go to build the climate of the class. Their relationship will create a particular climate in the class which might continue to exist even in the absence of the teacher.

Good, in the Dictionary of Education, lays stress on the emotional aspect of the interactions in the classroom when he defines classroom climate as the emotional climate. By this he refers:

> To all environmental conditions or qualities that tend to produce a given type of feeling or emotional response, especially the teacher-pupil and pupil-pupil relationships as environmental influences during the teaching-learning process.

John Withall (1972) attempts to define climate as "the emotional tone which is a concomitant of interpersonal interactions". He has emphasized on the emotional tone which generates from the interpersonal interactions.

Thelen (1974) defined classroom climate as "way of

life" or 'ethos' developed by the class members through continuous interactions.

This 'way of life' cannot be directly observed but it is inferred from other things that can be observed. The obvious 'other thing' is 'what goes on' in the classroom, and the obvious people from whom to get observations are the ones who make these things happen: the teacher and the students. This way of life has basically all the dimensions of the way of life in the family, business or club. But each of these groups has its unique composition and environment. Sundarraj Rao (1977) in his study on classroom climate has attempted to combine all these ideas when he states that it is taken to mean the general, academic and psychological atmosphere that occurs in the classroom as an outcome of the behaviours of the teacher and the pupils and their interactions.

Perkins (1951) concluded that "the quality of teacher-pupil relations was a major determinant of group climate".

Connor (1960) in his study examined the influence of the school and the interaction of the class group to determine the effects of each on climate. The children interacted socially more and expressed themselves more freely during the formal work of the classrooms than did in the classes with poor climates. Teacher-pupil rapport was better in the well-adjusted groups than in the poorly

adjusted groups.

He describes 'climate' as follows: "Climate is referred to as those dynamic relationships between pupil and teacher, and pupil and pupil which make for good or poor classroom adjustment".

Mishra (1971) defines classroom climate as the term which refers to generalized attitudes towards the teacher and the class that the pupils share in common despite individual differences. The development of these attitudes is an outgrowth of classroom social interaction. As a result of participating in classroom activities, pupils soon develop common attitudes about how they like their class, the kind of person the teacher is, and how he will act in certain situations. These common attitude colour all aspects of classroom behaviour, creating a social behaviour pattern or climate that appears to be fairly stable one established. Thus, 'climate' is merely an abbreviated reference to those qualities that constantly predominates in most teacher-pupil contacts and contacts among the pupils in the presence and absence of the teacher.

All these definitions focus on the interaction between teacher and pupil and among pupils, as they are observable measures of classroom climate. At the same time, these definitions hint at the emotional and psychological 'tone'.

Classroom climate can be described as an

environment which is created due to the ripple effect of the socio-psychological world of teachers and pupils.

3.2 THELEN'S MODEL OF CLASSROOM CLIMATE

The climate of a classroom is generated as a result of the interaction between the teacher and the pupils and between the pupils themselves. The teacher is the creator of the climate, for, in a classroom the teacher is the leader and the pupils are the followers. Teachers participate, of course, in this way of life and through their participation, they modify it. The processes which bring about mutual accommodation of students and teachers - and the sense of direction that guides these processes constitute the operation of the latent curriculum. These developing or culture building processes constitute the background, the context, the personal-social frame of reference within which the meanings of the foreground planned activities are sought by each student, for example, learning to multiply may be accompanied by learning to hate mathematics, by learning that one isn't bright, by developing attachments to other pupils, by learning to deceive one's parents, and so on. Here we see that learning mathematics is bound up with different outcomes for different students. It is probable that the educative significance of the planned activities, like whether any learning that takes place within a classroom will ever be used outside it, depend both on the nature of the way of life of a classroom and on the way these activities are

implanted in it.

The dynamic of a classroom is a sum total of the various activities that takes place therein some of them being educative if it stimulates a pupil's thinking, builds up attitudes and leads him to be aware of his choice in life and to select them. Educative activities give pupils a motive to achieve, widens their perception of the world around them and challenge them to better living. Non-educative activities on the other hand, cause boredome, create confusion and conflict in the pupils psychical world and do not train him to face life.

The classroom resounds with many activities but some are more educative than others, some are not educative at all. For any particular child engagement in any activity would be considered on the educative side, if it stimulates his thinking, stirs up awareness of his attitudes and leads him to see and to make his choices. It also clarifies his views and perceives the world around him as challenging and exciting and makes him achievement motivated. On the other hand, the activities become non-educative if they put him to sleep as it creates confusion and conflicts in his psychic world, convince him that he does not belong to the class or train him for failure in real life.

Model of Classroom Climate

It was Herbert Thelen who undertook to describe

and study classroom climate in terms of three component factors in any class. He strives that any learning climate in the class consists of three essential factors which may be seen in different combinations. They are:

1. Pupil involvement or Authenticity (A).
2. Pupil satisfaction or Legitimacy (L).
3. Pupil goal attainment or Productivity (P).

Each and every class contains these three components but they vary in proportion.

The A, L, P components are involved in any learning activity given by the teacher because the teacher has a pre-determined goal to be achieved.

The A, L, P components of any class can be studied in terms of certain behaviour which have been considered the sub-factors of each of these components. For each component eight sub-factors in positive and negative form have been discussed thoroughly in aspects of classroom climate and the whole concept of classroom climate is pictorially represented as a triangle with its twentyfour sub-factors. (Figure 1)

3.3 ASPECTS OF CLASSROOM CLIMATE

Our problem consists in providing activities in such a way that they are of benefit for the majority, if not, all the pupils in a class. Herbert Thelen's ALP

construct provide a suitable solution to the problem at hand.

The ALP constructs are:

1. Authenticity
2. Legitimacy
3. Productivity

(a) Authenticity (Involvement to the Deepest Level)

An activity has authenticity for a chief if:

1. he findsits worthwhile or meaningful.
2. he can participate in it intelligently and with understanding.
3. it enables him to relate his past experiences with the present ones.
4. it makes the child feel alive, challenged and completely involved.
5. he senses the activity as exciting and dramatic.

In activities that are authentic, the child feels that he fully functions that has thoughts, feeling, moods and fantasies. If he is so disposed that he can examine his experience to find out about himself, others, the nature of

ideas and of the world. He admits others as partners and enriches and not as threats or constrainers. He feels free to make his own decision and to accept the consequence thereof. Theoretically, the acid test of authenticity would be the penetration of experience to the 'inner core' to the 'deepest' levels of 'meaning' but in practice classrooms are seldom intended to penetrate to these 'deep' levels.

An activity is not authentic for the child if:

1. he feels that it is artificial.
2. he finds that the actual purposes are sensed to be different from the purposes it really serves.
3. he does not know what to make of it.
4. his past experience of living can have no bearing on the present situation.

On the other hand, an authentic activity is not necessarily comfortable, easy or familiar.

(b) Legitimacy (Purposeful, Usefulness for Future)

Legitimate activities are:

1. essential and useful for children because through them the children get the training to solve problems.

2. purposeful and concerned with the academic subjects taught in the class.

3. necessary for the future career of children and provide them models for the equipment for future.

Legitimate activities animate the process of socialization which is one of the main aims of education.

(c) Productivity

An activity is productive if:

1. it is effective for some purpose or if the given purposes are served by those activities.

2. it makes the child conscious of its goals and it learns how to achieve them.

3. it leads the child to self-guidance and self-learning.

4. it unfolds and develops potentiality of the child.

All classrooms have some components of productivity. Though some components of authenticity are muted in order to maintain productivity and some legitimating authorities may be suspended in order to enhance authenticity. It is productivity that justifies the existence and functioning of any classroom as a group.

Productivity can be regarded as a characteristic of individual students and/or of a classroom as a group. A classroom is a productive group when it is action oriented. Its effort would be directed, to making things, changing environmental conditions and solving problems. It would act purposively and would consciously obtain feedback, assess the situation and make decisions about how to organize its next effort. It would not only produce, it would learn or develop a methodology of production.

Every classroom has components of the ALP constructs. The details of the components of Authenticity, Legitimacy and Productivity as have been adapted to Indian classrooms, (by Sister Elvira), is given below.

The criteria of Authenticity, Legitimacy and Productivity have eight components each as described below:

ASPECT - AUTHENTICITY

Components	Items
1. Role of Coordination = Maintaining effective relationship of behaviour within the classroom.	1. There is unity in my class (+). 2. There are many conflicts and difference of opinion among the pupils in my class (-).
2. Openness = Freedom to behave, act or express.	3. I feel free to express my ideas and opinion in my class (+).

	4. No, one listens to the other when any pupil talks in my class (-).
3. Involvement = Full participation in the learning process.	5. Sometimes, we get engrossed in the learning process (+).
	6. In my class, pupils avoid sharing of work that is assigned to us (-).
4. Expectation = Looking forward to certain behaviours or actions to happen.	7. Our expectations of good teaching are satisfied by our teachers (+).
	8. In my class, the teachers do not care about our expectations of better teaching (-).
5. Cognitive Input = The knowledge that one absorbs through the learning process.	9. We not only get rich content matter of various subjects but also general knowledge from our teachers (+).
	10. We hardly get anything else from our teachers besides the content matter from text books (-).
6. Affect Arousal = The awakening of feeling and emotions in a classroom while learning or due to interaction with each other.	11. For the whole of my life my present class will have sweet memories for me (+).
	12. The bitterness that I experienced about my class will remain with me for my whole life(-).
7. Stimulation = Activating a person to think or act.	13. Classroom teaching enables me to think on my own (+).

	14. I do not get enough stimulation through classroom teaching (-).
8. Unself Conscious Absorption = Being aware of imbibing certain behaviours, values, etc.	15. When I am in my class I feel that time passes quickly for me (+).
	16. I feel that time passes slowly when I am in class (-).

ASPECT - LEGITIMACY

Components	Items
1. Imposed Discipline = Authoritative control of pupil behaviours thought rules and regulations.	1. My teachers can maintain good discipline in my class (+).
	2. There is no discipline and order in my class (-).
2. Utility = Usefulness of any activity in a classroom.	3. I fee that what I learn in class will help me to face life and its problems (+).
	4. I feel that what I learn in class is not of any practical use to me (-).
3. Homogeneity = The degree of which pupils are similar or alike in their behaviour traits.	5. The composition of my class is such that we take quick decisions without any bitter conflicts (+).
	6. There are many conflicts in my class which do not allow us to take any decision (-).
4. Commitment = Whole-hearted involvement in any activity.	7. During my activity in my class, the pupils have a great sense of commitment (+).

	8. In my class, the pupils show a lack of commitment during any activity (-).
5. Democratic Behaviour	9. Our teachers allow us to take part in discussions (+).
	10. Our teachers take all decisions in our class without even consulting us (-).
6. Group Strength = The support that is received in being together, collectively.	11. We are so united in our class that we help each other in our work (+).
	12. In my class, each one is aloof and does not help the other (-).
7. Directedness = Having a direction for an activity so that movement leads to progress.	13. Our teachers come to class in time and enjoy teaching us (+).
	14. Our teachers are unpunctual and do not have any interest in teaching us(-).
8. Identification = The appropriation into the self of the characteristic of a group.	15. Our class teacher feels that our class is her own (+).
	16. Our class teacher does not feel that our class is her own (-).

ASPECT - PRODUCTIVITY

1. Interpersonal Support = Mutual assistance by teachers and pupils to one another.	1. There is a co-operation and love for work among our teachers (+).
	2. Our teachers do not try to understand our difficulties (-).

2. Role satisfaction = The pleasure a pupil experences when one performs one's duty or as expected of one.	3. It gives me great pleasure to go to my class (+). 4. In my class, I do not get any satisfaction from my studies (-).
3. Resources Utilization = Making use of materials, aids and talents one possesses in order to be more effective.	5. Our teachers make their lessons interesting by using various teaching aids (+). 6. Our teachers do not use enough teaching aids (-).
4. Role Manifestation = The characteristic behaviour and expectations that others have of a person.	7. Our teachers are devoted to their work and are interested in teaching us (+). 8. I feel that my teachers should put in more effort to help me in my studies (-).
5. Behaviour Consonance = The harmony that exists between the behaviour and expectations that others have of a person.	9. I like the behaviours of our teachers and feel like inviting them (+). 10. Our various teachers behave differently and hence we feel confused (-).
6. Help = The right type of assistance rendered.	11. Along with the lessons,our teachers tell us many things that will be useful in life (+). 12. In my class,our teachers are absorbed in giving us content matter only and for getting to solve our difficulties (-).
7. Physical Facilities = The class setting,seating arrangement,light, etc.that are available to pupils in a classroom.	13. The furniture in our classroom is comfortable (+). 14. In my class there is no proper seating arrangement (-).

8. Fulfilment = The joy and satisfaction one obtains after one has one's wishes fulfilled.

15. I am extremely happy to be in my class and wish I could always study with the same companions (+).

16. I do not enjoy even a single moment in my classroom (-).

3.4 GENERATION OF CLASSROOM CLIMATE

The climate of the class depends much on the teacher. It is he who motivates the children, guides the children, decides the pre-determined goal or objectives for the children, and directs the activity in order to achieve the goal or objective. So what climate will generate in the class, or in what combinations will the A, L, P components work in a class, will depend on the teacher's handling of a situation. Any change in classroom climate depends on the behavioural pattern of the teacher who initiates the activity; and the students who respond to the teacher's stimulation. In short, we can say that the classroom climate is the general characteristic of a class. It is the resultant of the various interactions among teacher and the pupils in a learning situation.

The above discussion is not to borrow any factor that has any possible effect on the climate of the class. Many factors play a part in the classrooms at the same time, like the subject taught, mutual perceptions of teachers and students, teachers-pupils' readiness, the time of the class, physical activities and such other

factors. To a large extent, content decides the nature of the activity the teacher chooses, the teacher's state of mind - whether she is tired or tensed or interested or enthusiastic or possess professional competency or not reflects in the way she handles the class work. There are strong evidences which strongly point out that inspite of teacher's enthusiasm to work well, if the pupils are not ready to interact, she can hardly make the climate of the class a 'learning' one. This depends upon how the pupils perceive the teacher and how the teacher perceives the pupils. All these and other factors will have their effect on the classroom climate.

3.5 MEASUREMENT OF CLASSROOM CLIMATE

In recent years the importance of the socio-psychological atmosphere, or 'climate' in which a class group work has been strongly emphasized in educational literature. How it operates in the real classroom situations has been long felt by the researchers. They have fully devoted themselves to study the complex and comprehensive concept of classroom climate and the factors involved in it. These research attempts are based on the assumptions that classroom climate is not only observable but also interpretable, measurable and analysable. For this objective, the concept has been studied from two angles, one as a dependent factor which operates on its own and affects the other factor in the classroom climate.Classroom

climate has also been studied in terms of few factors considered to be its own components. More studies are also operating in this field in order to find out its influence on various factors as classroom trust, classroom initiative, classroom cohesiveness and all group factors; and pupil initiative, pupil anxiety, pupil adjustment and all individual factors.

Thelen (1974) developed a tool for measuring the classroom climate as he opined that the climate of the class is usually reflected through the activities they do in the classroom. His tool covers a range of pupil behaviours under each of the three constructs - Authenticity, Legitimacy and Productivity. This point has been discussed in details in the previous chapter.

Sundararaja Rao (1976) has used a pupil and teacher scales separately regarding the day's classwork to measure classroom climate.

The triangular concept of classroom climate has been prepared by Sister Marie de Sales (1977). She has developed a scale covering a range to eight behaviours under each component (A, L, P) which is a pupil response form. The scale has fifty items through which we can obtain individual scores. Through these scores a classroom index for climate can be obtained.

For more comprehensive picture of the classroom,

other independent factors also should be measured on separate scales, including classroom climate score and other factors should be plotted graphically into a classroom profile. The interpretation of the classroom climate can be made from the profile which has been termed as "Climatograph".

The Relevance of the Three Constructs of Classroom Climate

If one wishes to reproduce in a picture all the colours of the landscape he may do it with three negatives expose through red, yellow and blue filters. That is, these aspects of the scene combine to capture and reproduce all possible colours. In our work, authenticity, legitimacy and productivity are primary aspects, equivalent to the primary colours. Our reason for considering them to be 'primary' is that through them we can bring to blow the basic psychological, social and technological knowledge. We need to comprehend personal, social enterprises.

There is nothing in nature that tells one that all colours can be made from red, yellow and blue. The discovery of red, yellow and blue sensitive cones in the retina of the eye added powerful conformation to the idea. As a matter of fact, by a slight change in the process, purple, orange and green work just as well. Similarly, there is nothing scored about A, L and P other sets of constructs - if one could only think of them - might work as well. Treading further

through this metatheoretical field, we note that this fact that one used red, blue and yellow aspects from which to reproduce all the colours obviously does not mean that he thinks everything in nature is coloured red, yellow and blue. In the same way, he recognizes that A, L and P, however, fundamental in our process for reproducing classrooms in thought may not be all fundamental in nature. Some other themes might well be more salient in at least some classrooms. They might explain more of what the classroom is really like over time more powerful or universal themes that correspond more frequently and authoritatively to empirical realities may be discovered and used to replace A, L and P as the fundamental aspects that shape our classroom inquiries.

3.6 CONCEPTUAL BACKGROUND OF ACADEMIC MOTIVATION

A Concept of Motivation

Motivation gives both direction and intensity to behaviour. Motivation to learn gives direction and intensity to human behaviour in an educational context. Motivation to learn in school gives direction and intensity to students' behaviour in a school situation.

Motives relate to the 'why' of human behaviour, 'what' people do, 'how' they do it, 'when' or 'where' it is done are all important, but 'why' people do, 'what' they do is the motivational question.

- Why do people pollute the rivers and air?
- Why do nations go to war?
- Why does one man murder another?
- Why do workers go on strike?
- Why do some students try to learn in school?
- Why do some students not try to learn in school?
- Why do teachers teach?

These are all motivational questions. But to say that 'motivation gives both direction and intensity to behaviour' is to beg the question: 'What is motivation?' To be more precise we have to say that motivation is that which gives direction and intensity to behaviour. And motivation to learn is that which gives direction and intensity and human behaviour in an educational context. And motivation to learn in school is that which gives direction and intensity to students behaviour in a school situation.

Motivation is an inferred construct. Direction implies selection from possible variations in purposes or goals. Intensity implies possible variation in terms of degree of effort or energy put forth to attain the goal. Each of these three factors is discussed below:

1. Motivation is Inferred

To say that motivation is that which gives direction and intensity to behaviour is not very helpful

but describing and understanding 'motivation' or 'motivation to learn' or 'motivation to learn in school' must begin at this point.

In many ways, the problem is similar to the one we face in dealing with intelligence in an educational setting we always infer the nature and degree of intelligence from observations of a student's behaviour. No one really knows what intelligence is. So, we simply watch what a student does (or study his performance on standardized tests) and then make inferences about his intellectual ability. We never actually measure his intelligence but only how he used that which he has. We have to use the same process to understand that which gives direction and intensity to what young people do in school.

However, the years the power of the concept of intelligence has become so great that few persons have even attempted research studies without starting from the assumption that measured ability (i.e., IQ) is the most influential variable involved.

This is unfortunate. The great strides in understanding of human intelligence have contributed immeasurably to our knowledge of what man is and how he learns. But an educational blind spot seems to have developed along with these advances in research on intellectual abilities. IQ score appear to be exact, while other variables such as motivation or personality or cognitive style seem slippery

and difficult to pin down with precision. The correlations between IQ and achievement, however, always leave much to be desired; students who score high on measures of IQ tend to do better in school than students whose measured IQ is low, but discrepancies persistently occur. All of the research in the area of underachievement, for example, reflects both an awareness of and a probing interest in the fact that some students do not do well as they ought to, when they 'ought to' is defined in terms of measured aptitude or IQ. Something else must be involved.

Most educators account for the difference between predicted achievement and actual achievement by postulating the concept of motivation. In other words, motivation is invariably inferred from observations of behaviour, usually in conjunction with a consideration of ability or IQ.

In the conventional wisdom of education, 'motivation' and 'ability' are recognized as relative discrete phenomena. Because research and instrument development have proceeded unevenly and much more rapidly in the area of intelligence than in the area of motivation, however, our understanding of learning ability is much greater than our understanding of motivation to learn. Both are inferred constructs, however, but while 'ability' summarizes observations about what an organism will do or wants to do. This brings us to a consideration of the 'direction' and 'intensity' factors described above.

2. Motivation Gives Direction to Behaviour

Behaviour is purposive. Life is not without direction and motives flow from the well spring of life itself. They are energy in action. Philosophy and physiology fused. Motivation gives direction to behaviour.

Our concern here, however, is with 'motivation' in an educational sense, such as 'motivation to learn' or 'motivation to learn in school'. These differentiations, although, apparently simple, are actually quite complex. 'Education' is not 'schooling' and though educators are concerned with learning, 'schooling' does not necessary result in 'education'. The point is made because children who are 'motivated to learn in school' may actually be motivated to 'get good marks', 'do as they are told', 'obey the rules', 'write neatly', or any one of a hundred things which may or may not be related to 'education' but which they have "learned in school". 'Motivation to learn' rather than 'motivation' or 'motivation to learn in school' will be explored. There are obvious relationships between these concepts, and every effort will be made to relate 'learning' to 'learning in school' in such a way that the concepts have both clarity and utility.

The basic purpose of schools is to help children learn. But helping children learn means helping children learn: (i) to value learning, (ii) to want to learn,

(iii) how to learn, (iv) to value knowledge, (v) to acquire knowledge, (vi) to understand knowledge, and (vii) to behave according to knowledge.

The ultimate objective of the educational effort is to help youngsters learn to behave according to the best knowledge that is available at any given point in time. And 'motivation to learn' ought to aim people in that direction.

But helping people behave according to factual knowledge is not possible unless people understand that knowledge, unless they give meaning to that knowledge based upon their own past experience. Meaning always comes from the individual and what he has already learned understanding represents the union of past experience and new stimulii in the learner's mind.

Because acquisition of knowledge precedes understanding, schools must help youngsters acquire knowledge. Helping children acquire information and knowledge is an educational objective that must be realized before those students can proceed to objectives such as understanding and behaving.

This logic goes even further valuing knowledge is not possible unless youngsters have learned how to learn. That is, the skills of learning are not only means to more noble ends but purposes in their own right. Learning how to learn, however, is meaningless if students have not

learned to want to learn. In other words, learning to want to learn is an educational objective.

Helping children learn to want to learn, though, presumes that the children value learning, which is the most basic educational objective of all. Unless children have learned to believe in the value of learning as a human activity, nothing else will count much anyway.

To begin with the idea that motivation is that which gives direction and intensity to behaviour is not to suggest, thereof, that the direction is aimless or unknown. Quite the contrary, 'motivation to learn' means many things, and the general direction in which such learning should lead according to the values and understanding.

Because these purposes are functionally related to one another, however, there is an inexorable logic to the direction which has been defined. This logic leads towards the idea of 'rational man'.

Motivation presumes valuing and values are learned behaviours; thus motivation, at least in part, is learned and it can be taught. Motivation gives direction to behaviour

3. Motivation Gives Intensity to Behaviour

In the human organism, intensity implies effort, activity, energy output. If values are the part of

motivation which gives direction to human behaviour. What causes the organism to strive? To initiate? To carry through? Five factors seem especially important:

1. Availability and quality of stimulii
2. Perceptual openness
3. Handling of dissonance
4. Physiological functioning
5. Anxiety.

/Research studies have repeatedly shown that motivation is either affected by or a function of the number, quality richness, intricacy, uniqueness, and complexity of stimulus material. The organism needs stimulation when it is deprived of stimulii, the organism seeks stimulii or even makes its own. Over extended periods of time, those organisms which exist in stimulus - deprived environments develop lower mental abilities or in extreme cases they die. On the other hand, those which exist and function in stimulus environments which are rich and varied develop higher mental abilities. Organisms of all levels and kinds are attracted to rich stimulus sources, especially sources which are extensive, varied and novel/.

The second factor which affects the intensity of motivation is the personality structure of the learner, and especially his openness to experience. Those persons who are maximally perceptive, adequate and relatively unthreatened

are drawn to the new and the novel and the unknown. Those who are psychologically 'closed' who have extensive defense mechanisms and perceptual barriers, tend to repel new stimulii. Openness is a function of self-concept and manifests itself especially in the response of the organism to stress or threat, but the open individual is more curious, more inquiring, more excited, more 'motivated', if you please.

If openness might be considered, the extent to which the organism is perceptually capable of receiving and processing stimulii, the style or manner in which he handles dissonance or ambiguous stimulii is another factor which affects the intensity of motivation. Dissonance may appear in either one or both of two forms, and the way in which the individual copes with either affects his motivation. On the one hand, there may be a discrepancy between where the individual is and what he wants in the valuing sense. Inconsistencies, anomalies, and ambiguities appeal to those person who are psychologically open, and they work to resolve the dissonance. Likewise, when the individual senses that where he is and where he wants to go are not the same in terms of his value framework, he acts to resolve those kinds of inconsistencies, too. In other words, both cognitive dissonance and affective dissonance contribute to motivation.

The physiological functioning of the individual is another factor which affects the intensity of his

motivation to learn. Basal metabolic rate, endurance, cardivascular functioning, strength and the like all play a part in affecting motivation.

Anxiety is another factor which affects the intensity of behaviour. Anxiety is apprehensiveness in any given situation and results from the interaction of the individual's concept of self, the number and quality of stimulii, and the dissonance which is perceived. A certain degree of anxiety seems to lure the learner forward into the learning task. Too much anxiety unquestionably drives him away. When the individual finds himself confronted with an ambiguous or value conflict situation, he becomes uncomfortable and apprehensive. Whether the anxiety induced attracts him forward or drives him back is partially a function of the type and extent of the dissonance involved, partially a function of the adequacy and security of the self, and partially a function of the number and type of stimulii present. Those persons who have clear, strong, positive self-concepts of self are capable of perceiving and coping with greater dissonance and with more stimulii than those with less clear, weaker, more negative views of self. As related to motivation, the important point is that there is a curvilinear relationship between anxiety and achievement behaviour. This means that motivation can be too 'high'. Too much motivation in other words gets in the way of a student's learning. Stated more precisely, the relationship

between achievement and motivation is curvilinear rather than linear. Thus, there is a point beyond which motivation is debilitating rather than facilitating of learning. For this reason, motivation should probably be thought of in optimal rather than maximal terms.

Too many stimulii, too much dissonance,too much uniqueness and novelty and ambiguity overwhelm, the learner and he withdraws from rather than proceeds toward the learning task. Cognitive "stuffing" or extreme dissonance do not affect motivation in positive ways. They impede learning. But, no stimulii or too few stimulii or no dissonance at all result in inappropriate behaviours, too.

Students who are too highly motivated may focus on a very narrow segment of their educational world; and miss the relationships in learning which are so important. They are less able to see the patterns and make meaningful interpretations of the complexities of the learning stimulii. Students whose motivation to learn is too low are unable to focus their perceptual energies long enough or clearly enough to engage in the kinds of experiences which are conducive to learning.

Above discussion suggests that motivation is a relatively constant phenomenon; it does not change much, except over extended periods of time. Values cognitive style, perceptual defenses, and self-concept, for example, are all relatively durable. They will change but generally

only slowly. Interest and perseverance are related to but different from motivation. Interest is basically short term commitment. Perseverance is basically working style. The optimally motivated youngster may have difficulty persisting and may even lack interest in the immediate task at hand, but still be motivated to learn and the opposite might also be true.

In summary, motivation to learn is that which gives both direction and intensity to human behaviour in an educational context. As such, motivation can only be inferred, it is a function of values and educational purposes; and it is affected by the kind and quality of stimulii available, openness to experience and perceptual style, dissonance, anxiety, and the psychological functioning of the individual learner involved. Furthermore, it is probably durable rather than fragile, and because of a variety of factors, motivation needs to be thought of in optimal rather than maximal terms, since too much motivation evidently 'gets in the way' of positive learning. The point is, motivation to learn is complex and elusive.

3.7 THEORETICAL MODEL OF ACADEMIC MOTIVATION

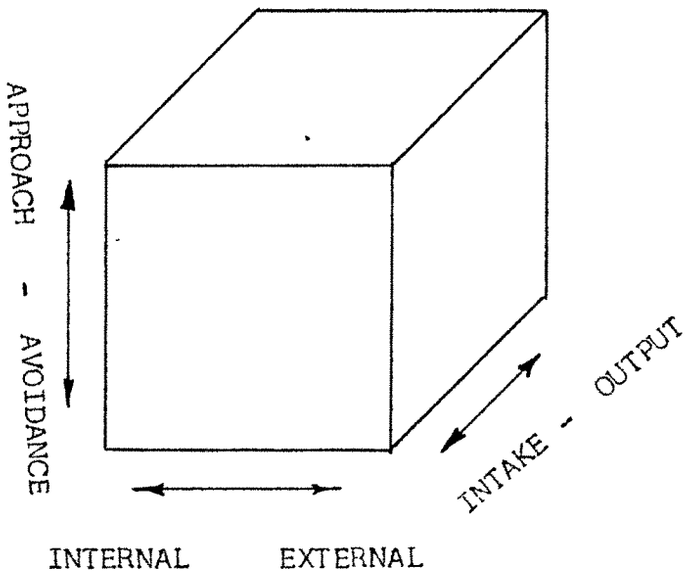
Motivation to learn is one of many types of human motivations. Research in the area of motivation has identified many kinds of human notives; affiliative, achievement, sex, hunger, power, economic aesthetic, and the like. Academic is one kind of motivation.

The term 'academic motivation', however, may be too narrow. In the conventional academic setting, students are motivated in many different ways, not all of which are positive. For example, some students are obsessed with a desire to 'get good grades', but to presume that 'grades relate directly to learning' as it was outlined above is certainly questionable in some cases, at least. It is true that students whose motivations to learn are positive will tend, on average, to learn more and thus, they will generally receive higher marks from their teachers than students whose motivation to learn are otherwise. But, it is also true that some youngsters become puppet-like and parrotlike in the educational context, simply in order to 'get good grades', and one is forced to conclude that their conformity behaviours are basically unhealthy and undesirable. However, the fact that some students 'do as they are told' in order to benefit positively from the experience and learn, thus, conforming in the best rather than the worst sense of that term, complicates the matter still further.

The question arises as to what causes students to strive in school and what factors are considered when teachers 'grades' their achievement. These are complex and interrelated and must be dealt with in terms of the complexities and interrelationships which are involved. For instance, the fact that research studies have

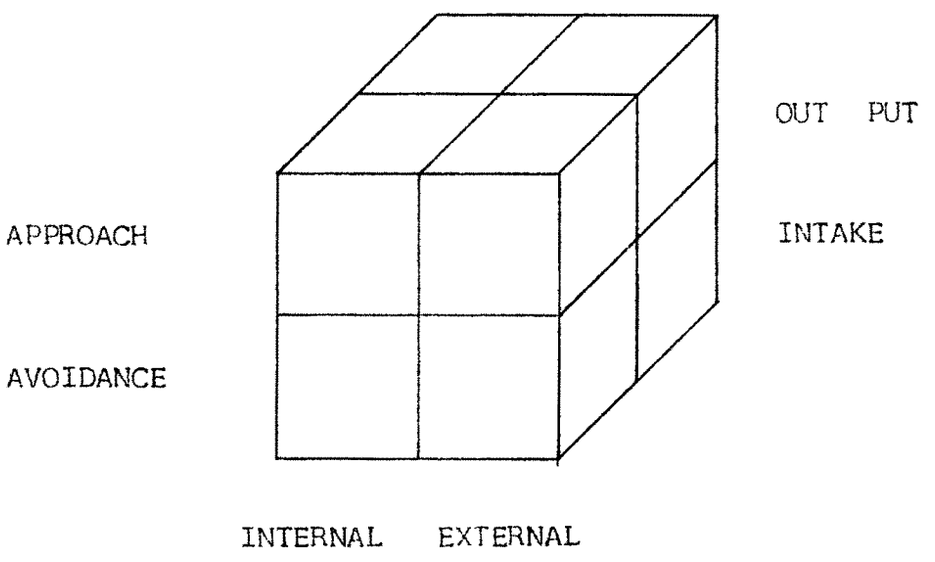
F I G - III - 2

THE DIMENSIONS OF ACADEMIC MOTIVATION



F I G. III - 3

THE THEORETICAL MODEL OF ACADEMIC MOTIVATION



repeatedly demonstrated that students' grades are a function of achievement, congruence with teachers' values, socio-economic background, intelligence, social acceptance, and motivation among other things, tends to negate the usefulness of many existing measures of academic motivation which have been validated almost exclusively against grade point average as a criterion. Such instruments may very well measure the 'motivation to get good grades', but to equate the factor with 'motivation to learn' would be a mistake of the most serious order. That such instruments often correlate positively with conformity and negatively with creativity, simply underscores the point in another way.

(a) Overview of the Theoretical Model

Academic motivation has several dimensions. Three are described below. These "dimensions" might ultimately prove to be "factors" in the statistical sense of that term and there may very well be more than three. At the present time, however, the three basic dimensions of academic motivation seem to be internal-external, intake-output and approach-avoidance. The labels are arbitrary. The dimensions appear to be real. A graphic portrayal of the model is the traditional three dimensional cube, as shown in Figure 2.

Dichotomizing each dimension into its polarized categories we get two-by-two graphic model as outlined in Figure 3.

Described this way, the model seems to have eight 'cells' or 'categories'. Before those categories are described, however, each dimension will be set forth in more detail.

(b) Internal-External Dimensions

Motivation to learn is in part a function of that which lies within the individual learner and in part a function of that which he experiences from his learning environment. Because these two interact and affect one another, they are considered a single dimension, but is undoubtedly a dimension with many aspects or many parts.

The "internal portion" of this dimension refers to those aspect of personality and value structure, which the individual learner brings with him to the learning situation. Self-concept perceptual style, belief system and the like make up the internal part of academic motivation.

The "external portion" of this dimension refers to the environment as a stimulus source and only those stimulii which are available within the immediate external environment are considered relevant: textbooks, parental approval, facial expressions of the teacher, film-strips, blackboard diagrams, teacher talk reference material in the school or home library, peer reactions, quality of language spoken in the home, number of new ideas encountered during

the day and the like.

The internal-external dimensions appears to reflect the source of academic motivation. That is, motivation to learn is in part a function of what resides within the individual and in part a function of the external world he encounters. Some positively motivated youngsters seem to draw most heavily upon forces located within themselves to enhance their learning. They believe in learning and knowledge, for example. They are intrigued by the new and novel; ambiguity and uncertainty excite them. They feel adequate, unthreatened and secure.

Other students equally well motived, seem to be positively affected by the quality and quantity of stimulii which they experience in school. Exciting lectures, fascinating movies, vivid illustrations and intense discussions are likely to spark these students' efforts.

To say it in still another way, some students apparently draw primarily upon internal factors in their desire to learn in school. Other students seem to draw primarily upon external factors. Still others draw heavily upon both. In other words, as far as the internal-external dimension is concerned there does not seem to be one "right" balance or ratio of internal and external factors, but there undoubtedly is a "right" direction to both of these factors. That is a student whose motivation to learn is positive almost inevitably evidences "Good mental health"

and functions most productively in a rich and varied stimulus environment. Youngsters who hold negative feelings about themselves, who are insecure, frightened, inadequate people or who repeatedly encounter a barren stimulus situation - limited number or poor quality of ideas, books, discussions, pictures - are much less apt to be positively motivated to learn. However, it is described, the internal-external dimension seem to be the source of academic motivation.

(c) Intake-Output Dimensions

Motivation to learn manifests itself in many ways, and these manifestations are encompassed here by what is called the intake-output dimension or what might be called the consumption-production aspect of academic motivation. Some students seem moved to consume the learning world around them, while others are producers in the main.

Students who are avid readers and thoughtful listeners - who seek information and new experience in every way are "intake" types, other students are "output" people. They write, they talk a lot. They generate ideas and concepts. Their motivation propel them to active rather than passive roles.

The intake-output dimensions then, seems to reflect the form or style of academic motivation: the actual substance of motivated behaviour when it appears.

Again, there is probably no 'right' form of academic motivation, although there are undoubtedly various types of persons. That is some positively motivated students are intake persons, in the main, whereas other students are output people primarily. Still others reflect a balance between these two styles. Negative academic motivations would probably reflect themselves in very different behaviours.

(d) Approach-Avoidance Dimensions

Any careful study of learning in an academic settings suggests that some students move towards teacher approval, stimulus ambiguity, novelty, social acceptance and the like, while other students move away from such things. The approach-avoidance dimension, therefore, seems to be directional dimension of academic motivation. However, once again the positive and negative aspects of the directional dimension are complex and not easily ascertained or understood. Though, some students move towards "good grades" and teacher approval, for instance, other students move away from such phenomena, but either group of students might be identified as "positively motivated" or "negatively motivated", depending upon the other factors which are involved. Even though the approach-avoidance dimension suggests directionality, therefore, that concept applies to the behaviour of the learners, in relation to the attainment or rejection of certain objectives or goals,

irrespective of whether an outside observer would categorize those goals as related to positive or negative motivation.

The point is some students who are positively motivated move towards good grades and teacher approval, whereas other students who positively motivated move away from such factors or do not move at all, and the differences probably reside in whether the source of motivation for the individual is primarily internal or external or whether the motivation is mainly intake or output in form. In other words the directional dimension (i.e. approach-avoidance) is only meaningful when understood in relationship to other dimensions: it is interaction of this dimension with the other dimensions which reveals whether a student's motivation is positive or negative. To say it still another way, it is the pattern of relationships among dimensions which is crucial.

(e) Relationships among Dimensions

Any observer of the educational scene knows that some students whose motivation to learn is positive may move towards (approach) reading (intake) an exciting novel (external stimulus) whereas other youngsters who are also positively motivated might move away from (avoidance) teacher approval (external stimulus) in order to generate (output) a graphic description of social equality for a history course, for example.

FIG III - 4

THE THEORETICAL MODEL OF ACADEMIC MOTIVATION

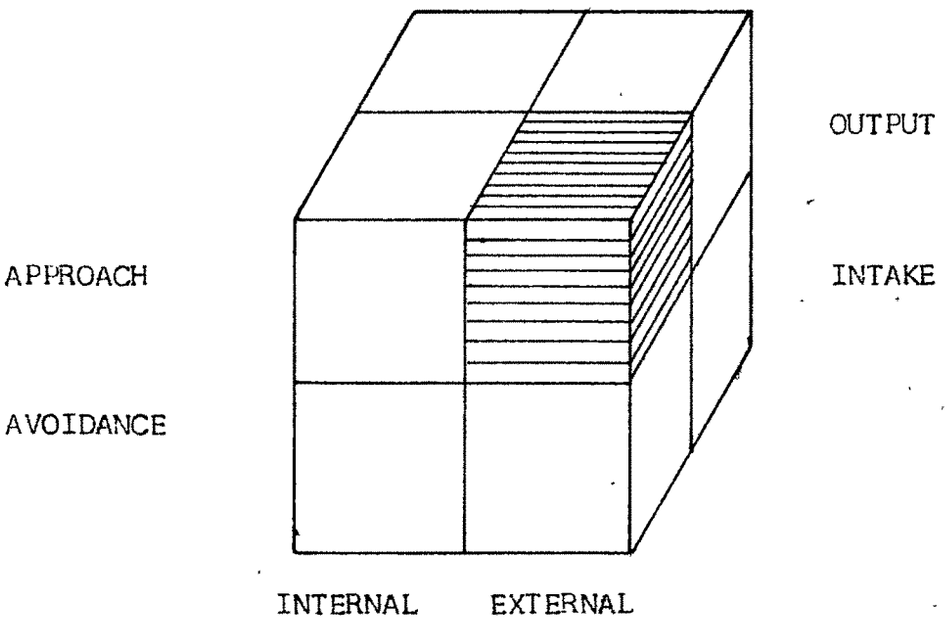
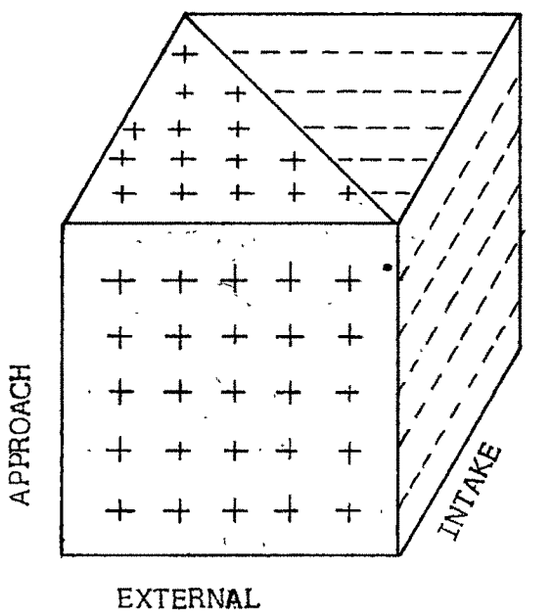


FIG III - 5

POSITIVE AND NEGATIVE ASPECTS OF A MOTIVATIONAL CELL

(b)



The concepts of "positive and negative", motivation therefore, are only meaningful if the pattern of relationship among dimensions is considered. Some internal factors are positive. Some internal factors are negative. Some external factors are positive. Some external factors are negative. The same thing is true for approach, avoidance, intake and output aspects of the other dimensions. Some positive forms of academic motivation express themselves in certain types of intake or output or approach or avoidance behaviours in response to various internal and external sources. But negative motivation is expressed through such behaviours also, so it is only through a consideration of the precise pattern of relationship among dimensions which brings meaning and utility to the concept of academic motivation.

If one goes back to the schematic diagram in Figure 3 the two-by-two outline describes eight specific cells.

This time, however, one of the cells has been (Fig.4) singled out and identified by special markings. This is the external-intake-approach cell. Suppose we take a special view of just that one cell and try to conceptualize it in both positive and negative ways. Figure 5 outlines how an approach might be graphically portrayed.

The diagram suggests pictorially that it is possible to think about the various dimensions of

academic motivation both in relationship to one another and in positive and negative terms. Employing such a logical approach, it is immediately evident that there are 16 different facets to academic motivation according to the theory we have described:

1.	Internal	-	Intake	-	Approach	-	Positive
2.	Internal	-	Intake	-	Avoidance	-	Positive
3.	Internal	-	Output	-	Approach	-	Positive
4.	Internal	-	Output	-	Avoidance	-	Positive
5.	External	-	Intake	-	Approach	-	Positive
6.	External	-	Intake	-	Avoidance	-	Positive
7.	External	-	Output	-	Approach	-	Positive
8.	External	-	Output	-	Avoidance	-	Positive
9.	Internal	-	Intake	-	Approach	-	Negative
10.	Internal	-	Intake	-	Avoidance	-	Negative
11.	Internal	-	Output	-	Approach	-	Negative
12.	Internal	-	Output	-	Avoidance	-	Negative
13.	External	-	Intake	-	Approach	-	Negative
14.	External	-	Intake	-	Avoidance	-	Negative
15.	External	-	Output	-	Approach	-	Negative
16.	External	-	Output	-	Avoidance	-	Negative

The best that can be done at the present time is to hypothesize along lines such as these and to develop instruments and procedures to test these hypotheses carefully with the development of new and different instruments,

the dimensions themselves will become more obvious or modified as empirical data are fed back to test the theoretical model which has been described.

The following are illustrations of behaviours within the framework of the individual dimensions set forth. An elaboration of such listings might be an appropriate point at which to begin. The primary thesis described above, though, dare not be forgotten. It is the pattern of relationship among the dimensions which is foremost rather than the specific incidents or specific behaviours themselves. Even so, a consideration of such specific behaviours may be one place to start:

Positive Examples of Internal-External Dimensions:

I) Sense of worth
I) Feeling of acceptance
I) Ability to tolerate ambiguity
I) Positive concept of other persons
I) Lack of prejudice
I) Belief in the importance of information
I) Minimum of defense mechanisms
E) Variety of points of view
E) Validity of information
E) Variation of sequence of stimuli
E) Multi-sensory stimulii
E) Accessibility of stimulii

Negative Examples of Internal-External Dimensions:

I) Excessive anxiety or fear

I) Jumping to conclusions

I) Fear or dislike of authority

E) Limited sources of information

E) Information embedded in other stimulii (hard to get at)

E) Sequencing of stimulii unduly repetitive

E) Validity postulated with few or no external referents.

Positive Examples of Intake-Output Dimensions

I) Voracious reading

I) Sensitive, attentive, listening

I) Surprise when confronted with novelty

I) Question-asking for information

I) Browsing in the library

O) Writing extensively

O) Practising skills

O) "Arguing" fine points in a discussion

I-O) "Insisting" that contrary views be presented

Negative Examples of Intake-Output Dimensions:

I) "Being quiet" but not "hearing"

I) 'Reading the assignment' without comprehension

I) Inattentiveness

O) Disruptive talk during discussion

O) "Talking about boys" all the time (for girls)

O) Throwing spitballs

O) Telling teacher off

Positive Examples of Approach-Avoidance Dimensions:

AP) Attending at non-required lectures, museums, etc.

AP) Ordering information source by mail

AP) Seeking out persons with opposing points of view

AP) Establishing and following definite study routines

AV) Dropping a course which is "poorly taught"

AV) Turning off radio during study hours

AV) Staying away from the "gang" some of the time.

Negative Examples of Approach-Avoidance Dimensions:

AP) Going to movies instead of doing homework

AP) Doing homework just to get teacher's approval

AP) Copying from seatmate during examination

AP) Excessive talking with friends on the telephone

AV) Dropping out of school

AV) Day dreaming

AV) "Giving up" during test

AV) Reluctance to ask questions when in doubt.

Three things, at least, are important about these listings. First, they are neither complete nor discrete

nor adequately described in the limited space here. Second, only the interactions among the dimensions are ultimately of assistance to the person who wants a valid conceptualization of academic motivation. Third, all ignore what must be a very important, mediating type behaviour (e.g. what happens in the mind of the student between intake and output activities, for example, or how the internal personality characteristics affect the processing of external stimulii). The first point can be clarified only through further discussion and extensive research, the second point has been emphasized before, and the third point illustrates the relationship between learning theory and motivation theory.

(f) Implications for Teaching and Research

Motivation to learn is a function of value, stimulation, personality structure, dissonance and anxiety, among other things. Because these factors can be affected or controlled, at least in part, by the teacher, implications for teaching become obvious. What teachers say, how they say it and the values which they reflect in their daily teaching all becomes perceivable substances from the learner's point of view. They are the feedback which students use to build their own conceptions of self.

Feedback is the 'stuff' out of which self-concept and values are built. Teachers must be aware of the kinds of feedback they provide for their students to perceive.

If motivation presumes values and if values give direction toward particular objectives of learning goals, then educator's conceptions of objectives and purposes become central to any consideration of what will help students learn to want to learn in school. Goals have at least two qualities - clarity and acceptability - and teachers probably have considerable control over the later; thus, the motivational problems in school emerge.

Working to 'clarify goals' and 'state objectives' precisely in behavioural terms will help students learn to want to learn if the goals are acceptable to them. Meaningful involvement and relevant curricula are probably more directly related to acceptability of goals than clarify of goals.

Motivation to learn gives direction and intensity to human behaviour in an educational context.

3.8 CONCEPTUAL BACKGROUND OF ACADEMIC ACHIEVEMENT

The word "academic achievement" is a very broad term, which indicates generally the learning outcome of pupils. Achievement of these learning outcomes require a series of planned and organized experiences and hence learning is called a process. In this process of achievement of change in behaviour one cannot say that all pupils reach at the same level of change during the same span of time. The level of achievement reached by the pupils in schools, is

called the academic achievement (school performance) of the pupils.

Learning affects three major areas of behaviour of pupils, (i) cognitive, (ii) affective, (iii) psychomotor, respectively. It is difficult to say without proper evidence, that pupils reach at the same level in all the three domains at a time. Pupils may be at a somewhat higher level in one domain and at a somewhat lower level in the other domain. This means pupils may be at different levels of achievement in different areas. As the areas of affective domain and psychomotor domain are not sufficiently explored, it is generally a custom to restrict the term 'school performance' to the level of achievement of pupils in the cognitive areas of various school subjects.

Here one should not restrict oneself to only academic performance but also to the accomplishments in other areas (non-academic performance).

Evaluation is the integral part of the teaching-learning process and it involves (i) identifying and defining instructional objectives in behavioural terms, (ii) using suitable learning experiences and (iii) constructing suitable evaluational instrument and appraising various learning outcomes.

Virtually all the teachers use some kind of tests to assess the progress of their students. Here are some of

the principles of measurement of educational achievement as given by Robert Ebel (1971).

1. The measurement of educational achievement is essential to effective education.

2. An educational test is no more or less than a devise for facilitating, extending and refining a teacher's observation of student achievement.

3. Every important outcome of education can be measured.

4. The most important educational achievement is command of useful knowledge.

5. Written tests are well suited to measure the student's command of useful knowledge.

Brief Review of the Previous Works

Several investigators have found the area of adjustment to be of vital importance in academic achievement. Congdon (1943), Houston & Marzolf (1944), Hibbler & Larson (1944), Carroll and Jones (1944) have all found several adjustmental problems to be associated with under achievement. Steinzor (1944), Cattell (1945), Thompson (1948) also pointed out that the over achievers were characterized by good adjustment to school and greater

awareness and responsiveness of environmental influences. Stormwold and Wrenn (1948) observed that a well adjusted student exhibits intrinsic interest in the subject matter of study, positive attitudes towards the requirements of his curriculum, stability to his goals, balanced emotional life, ability to concentrate on his task, and ability to enjoy life in many areas. Horrall (1957) found that those adjudged to have good adjustment tended to be high achievers while those adjudged poorly adjusted to be low achievers. Frankel (1960) found over-achievers to be more adequately adjusted to the academic situation. Robert (1962) reported significant differences between over and under achievers with regard to their scholastic adjustment. Rao (1963, 1967) found academic adjustment to be the greatest single factor that affected student performance.

Since academic performance is significantly affected by the nature of adjustment to the academic situation, ways and means have to be found to help students make desirable adjustment to the academic situation.

Influence of the Evaluating Instrument

White (1932) noted that "the examination has always been regarded as a valuable instrument for motivating learning, but the 'degree' to which it constitutes an incentive has never been determined.

Brown and Holtzman (1955) concluded that

"Motivation" appeared to be a more important factor in effective study. Peterson (1916) found that if students had an "active attitude in the process of learning" - that is, if they knew they were to be tested - their learning was positively influenced. Hauang (1944) concluded that absence of the 'intent' to learn is associated with absence of effective organization of material. Tyler and Chalmers (1943) found that warned groups performed better than unwarned groups. Boswell and Foster (1916) found that the intent to learn for 'permanent' retention really brought about the desired end whereas the intent to learn for 'temporary' recall was not so effective. White (1932) and Class (1935) showed that the student's awareness of the 'type' of examination to be given affected his study procedures and consequently his memory set.

Conclusion

All the three aspects of classroom selected for the present study have their theoretical conceptual background, namely, (a) classroom climate, (b) pupils' motivation and (c) academic achievement.

The conceptual background discussed in the chapter gives an impression that it has its own bearing on pupil performance. The next chapter deals with the problem and procedure of this research.