ABSTRACT
              Designed to provide community college instructors
with an understanding of how to improve the motivational level of
their students, this four-part guidebook reviews theoretical concepts
and offers practical advice concerning student motivation and
frustration. Section I provides an overview of both intrinsic and
extrinsic motivation and of conditions that may lead to frustration.
Section II lays out Abraham Maslow's theory of motivation,
emphasizing his hierarchy of needs. Following a brief introduction to
motivation and instruction, the concept of psychological and
physiological arousal, including its sources, its relationship to
motivation and to learning are explored. The relationship between
learning and anxiety is also examined. Then, a summary is provided of
the educational implications of the theories and concepts included in
this section. Next, section III describes the techniques employed by
instructors to promote extrinsic motivation, including the use cf
verbal reinforcement, the element of surprise, familiar examples,
games and simulations, test results and grades, and the transfer of
learning. This section also offers guidance on dealing with competing
motives, and reducing negative factors in the instructional setting.
Finally, section IV explores the influence of social conditions on
motivation, including social factors affecting both students and
instructors, and the social atmosphere of courses and programs.
(JMC)

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A Guide To
Motivational Procedures For Instruction

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College of New Caledonia. Centre for Improved Teaching
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2

PREFACE

The purpose of this Guide is to present some material that will help you understand and improve the motivational level of your students. Our orientation concentrates on environmental factors that affect motivation. That is, by manipulating environmental factors we can bring about a change in the student's behaviour. In addition, we have included some information about the motivating effect of frustration. The material on frustration is included because when students are frustrated they are very often highly motivated. Unfortunately they are often motivated toward the development of an undesirable behaviour pattern.

The Guide is divided into four sections. Section I, the Introduction deals with definitions and the concept of frustration. Section II deals with motivational theory and instruction. The Use of Motivational Techniques in Instruction comprises Section III. Section IV deals with The Influence of Social Conditions on Motivation.

We express our sincere thanks to Marg Leveridge for her fine work on the word processor, Linda Fieguth on organization and layout and to Diane Jacobs for the beautiful cover design.

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TABLE OF CONTENTS

SECTION I

INTRODUCTION TO MOTIVATIONAL CONCEPTS

In general, there are two basic types of motivation: intrinsic and extrinsic. Intrinsic motivation is from within the person and does not appear to be affected by environmental factors. With intrinsic motivation the individuals maintain their drive toward some goal without any apparent reward from the environment. Extrinsic motivation on the other hand, depends on reinforcements or rewards from the environment to keep the individual working toward some goal.

When we speak of rewards or reinforcements from the environment keeping a person motivated toward some goal, we often hear the remark that to use rewards or reinforcements is nothing more than bribery. To this our reply is that all people are motivated by reinforcements they have had in the past. No one learns to type or do accounting unless such reinforcement is present. A highly skilled typist or accountant may appear to be motivated from within because he/she has developed a set of self-reinforcing processes. The sequence for the development of self-reinforcing processes works something like this: initially the would-be typist or accountant may have had a great deal of support in the form of social approval from parents or teachers. Examples might be a compliment or pat-on-the-back for doing a good job on typing or in basic accounting methods. Later on, the self-reinforcement of typing fast and accurately or doing an excellent job on an income tax form tend to maintain what appears to be basically an intrinsic motivational pattern.

5

Another way in which we can differentiate between intrinsic and extrinsic motivation is in terms of self-perception. If students see themselves as the cause of their own behaviour, they tend to believe they are intrinsically motivated. On the other hand, if students perceive themselves as being under the control of external factors, they tend to view their behaviour as being extrinsically motivated. Hence, the way students perceive their behaviour and the environmental factors affecting their behaviour has a phenomenal effect on motivation. That is, if students perceive the motivational factors as being extrinsic when they are actually intrinsic, the students will wait for someone or something in the environment to give them a boost to get them going and keep them going.

One very important motivating condition that is often overlooked by instructors is what happens to the student when he or she is frustrated. In general the student exhibits behavioural changes in terms of the energy they are willing to expend and the direction of that energy on behaviour. Frustration can result from a variety of sources: First, frustration may be the result of a lack of reinforcement, where the student has done a phenomenal job, but does not receive any kind of reinforcement from the instructor. Second, frustration may be the result of not allowing the student to complete an activity that could lead to reinforcement. An example might be the result of the student running out of time and not being able to complete the last third of an examination. Third, frustration may result when the student is prevented from giving a response that could lead to reinforcement. An example of this type of frustration would be when the instructor does not call on the really good students because they always know the correct response.

6

There are several common behavioural effects of frustration. They are: aggression, regression, hyperactivity, emotionality and withdrawal. The generalization is that frustration motivates socially undesirable behaviour. As an instructor, you should try to avoid setting up frustrating situations as they are academically non-productive.

7

SECTION II

MOTIVATIONAL THEORY AND INSTRUCTION

Maslow's Theory of Motivation

While there are many theories of motivation, the most commonly accepted are those covering both the physiological and psychological needs. Physiological needs include the need for food, water, sleep and rest, activity, and sex. Psychological needs on the other hand, include the need for affection, attention, belonging, achieving, social recognition, end self-esteem.

A very popular motivational theory was proposed by Abraham Maslow in 1970. In this theory, Maslow saw needs existing on a hierarchical basis. At the bottom of the hierarchy are the Physiological Needs, such as the need for food, sleep and water. Next are the Safety Needs, which include our need to have things organized to be prepared for all types of situations, thus, reducing tension and threat. Love and Belonging Needs are next up the hierarchy. These include being a part of a group, and receiving affection and attention from others. The Self-Esteem Needs are next on the hierarchy. These needs include the need to be considered a worthwhile person to have a good opinion of oneself and to be thought of by others as a competent individual.

While Maslow referred to these first four needs on the hierarchy as Basic Needs, he also referred to them as Deficiency Needs in the sense that when the individual is deficient in one or more of these needs, they motivate the person to do something about satisfying these needs.

At the top of the hierarchy are the Meta-Needs. Also called the Growth Needs, they motivate behaviours that do not result from deficiency, but rather, from our need to grow. While the Meta-Needs are at the top of Maslow's Hierarchy, they are not hierarchical in nature. See Figure 1.

Included in the Meta-Needs are the: Cognitive Needs, the need for knowledge and symmetry; Esthetic Needs, which include beauty, truth and justice; and finally Self-Actualization, which is the need to become the best possible person that you can become.
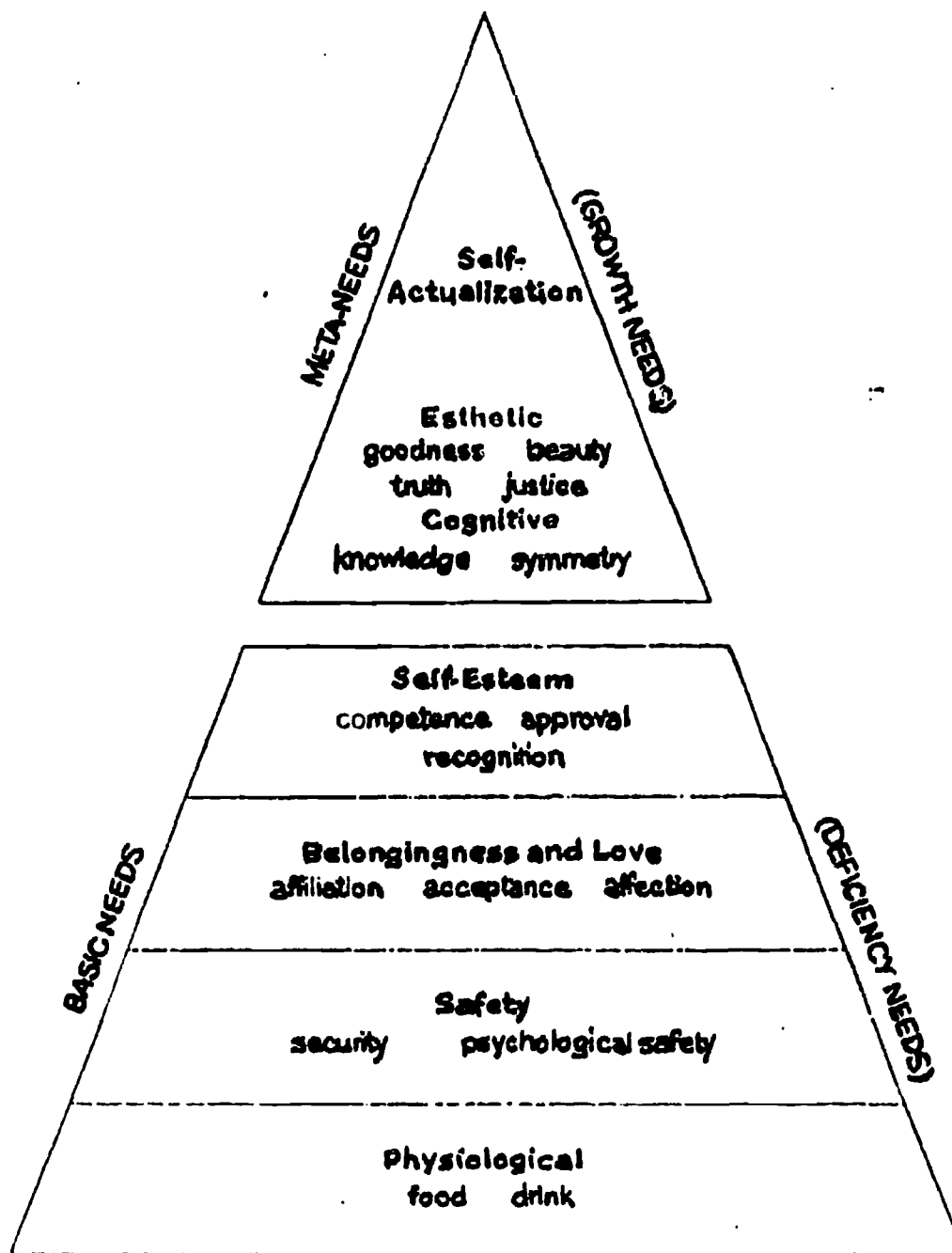
Figure 1. : Maslow's hierarchy of needs.

Motivation and Instruction

With the very short summary of the major components of Maslow's Theory, it is not too difficult to realize that a large number of human behaviours arise from motivations that are not the result of efforts to satisfy needs. It is, however, important for instructors to be aware of the needs of their students. For example, if certain of the basic physiological needs have not been met, such as hunger or thirst, the instructional/learning process will not be very effective.

In Canadian society, most student's basic needs are taken care of in good shape. The psychological needs on the other hand, are a completely different ball game. The psychological needs include the need to achieve, to belong, and the need for affection and attention.

The general idea is that instructors can use their knowledge of the various student needs to enhance the instructional/learning process. That is, many students are able to satisfy their needs for attention, affiliation, and achievement in the instructional setting. The problem for the instructor is that the learning tasks involved should not be too difficult that student success is virtually impossible, nor should the tasks be so easy that student success is viewed by the students as meaningless. Thus, the meaningfulness of academic tasks for students, fellow students, and instructors is very important in terms of recognition and attention.

For the student to attain self-actualization, which refers to the student becoming the best possible person he/she can become as a result of their own efforts, the guidance and feedback from a sincere, dedicated instructor are crucial factors.

The Concept of Arousal

In general, there are two aspects involved in the concept of arousal-psychological and physiological. Psychological arousal refers to such behaviours as attention or being alert. In effect, psychological arousal deals with the student's degree of attending and wakefulness. The

physiological arousal on the other hand, refers to nervous system changes that can be observed by measuring brain waves with the electroencephalaograph. A low state of arousal (resting), is characterized by deep, slow, regular brain waves of the Alpha type. A high state of arousal is characterized by shallow, irregular, and faster brain waves of the Beta type. For the instructional setting, the ideal would be to have the student in his/her optimal state of arousal.

Sources of Arousal

The basic sources of arousal are the receptors for vision and hearing, although the other receptor systems are also involved in arousal. For any one person, the arousal level is probably due to the effect of all stimuli operating at any one time. One of the problems, is that there is no direct relationship between amount of stimulation and arousal level. That is, some stimulus properties, such as novelty, surprise, and meaningfulness have greater chances of producing arousal than other stimuli.

Motivation and Arousal

There are two basic premises that denote the relationship between motivation and arousal. First, for any given task, there is a level of arousal at which performance will be optimal. Second, at any given time, a student behaves in such a way as to maintain the arousal level that is most nearly optimal for ongoing behaviour.

The first premise indicates that certain tasks can be performed best under conditions of relatively high arousal levels, while other tasks are best performed under conditions of relatively low levels of arousal. The second premise is that students continue to behave in order to maintain arousal near their optimal level. In effect, if the arousal level is too low the student will try to increase it and if arousal is too high, the student will try to lower it.

Learning and Arousal

The generalization is that effective learning takes place under conditions of optimal arousal. Conversely, low levels of arousal are characterized by lack of or a low level of attention, which rarely if ever produces effective learning.

Our problem then is for instructors to be able to control the level of arousal for their students. As mentioned previously, the primary sources of arousal are the receptors for vision and hearing. As such, we want to utilize stimuli; that are going to have the greatest effect on these receptors. Now what kind of stimuli are we talking about that can be used to help instructors control arousal? First, instructors are stimuli, as they control a large amount of all the stimuli the students respond to in the classroom. What the instructors say and do, their appearance, and their manner have tremendous effect on the arousal level of their students. This is both good and bad, as the instructor can keep the students at such a high level of arousal by presenting material that is way over the head of the students, that the students respond by "turning off" the instructor. On the other hand, the instructor may have mastered the art of the monotone, which sets arousal at the zero level. This is readily determined by counting the number of students that are sound asleep as well as those with their eyes open, but are in a comatose state.

To become more effective and efficient at controlling the arousal level of students, instructors can apply a number of very simple techniques. For example, changes in voice such as inflection, tone, and volume tend to enhance student attention. To find out whether you have fallen into the monotone pattern, all you have to do is record one of your presentations.

Of course, you can always resort to the ridiculous to raise the arousal level. Here, we are referring to such things as doing Yoga exercises, letting out a loud bellow or giving the lectern or table a karate chop. If you know what you are doing you will probably break the lectern or table. If you are not up on your karate chopping, you will probably get your students attention by waving your cast-laden arm.

In addition, you can present material of increasing interests, intensity, and meaningfulness, which has a very positive effect on attention.

Learning and Anxiety

One of the factors that you will have to keep in mind as you try to increase the arousal level of your students is that a side effect of this process is to increase the anxiety level. Anxiety is best described as feelings of fear and worry occurring in varying degrees.

A number of generalizations about the effect of anxiety on learning can be drawn from the research literature. First, students who are highly anxious about tests don't expect to do as well as those students who are less anxious, and hence, do not do as well on the tests. Second, highly anxious students do not learn as well as less anxious students from instruction. Third, and finally, for each student there is an optimal level of anxiety. That is, we each need some amount of anxiety to be aroused to the point where we do our best learning and give our best performance. Too little anxiety and arousal remains at a very low level resulting in poor performance. Too much anxiety and the student becomes overwhelmed by fear and worry, resulting in poor performance.

Additional information from the research literature deals with various techniques for reducing anxiety. While these various techniques have been effective in reducing anxiety, they have resulted in improved performance in most cases. The most effective techniques for reducing anxiety and concomitantly, improving performance are those which are oriented toward changing the students' attitudes about his/her personal competence, and toward focusing attention on the tasks at hand rather than on feelings of fear and worry.

Educational Implications

If we accept the assumption that high achievement needs are desirable, are we able to increase these in students? In general, there are programs available that provide students with a series of situations in which they are asked to

take risks, make predictions about their performances, modify their predictions on the basis of feedback, and earn or lose tokens on the basis of their performance. One of the main objectives of such programs is to encourage the students to make use of information about their past performance, to develop realistic goals, and to take personal responsibility for their performance. These programs can be quite successful in increasing measured need for achievement as well as in improving actual performance.

Another educational implication, is that in most school-related tasks, chance should have little or no bearing on performance, although there are many students that rely on luck to get them through. For example, some students say they were "unlucky" to have studied the wrong material or "had the bad luck" to foul-up when transferring answers to the answer sheet. Then, of course, there are those students who had the misfortune of being placed in an inferior instructor's class. The point is that instructors can exercise some control over the other three major categories to which performance can be attributed - effort, ability, or task difficulty.

It should not come as a surprise to any instructor, that continued failures are likely to have a negative effect on self-concept and on feelings of competence. Those students who have failed more than they have succeeded will eventually become quite reluctant in attributing their failures to lack of ability. Hence, it seems reasonable to predict that repeated failures are likely to contribute to feelings that external factors are in control. On the other hand, repeated successes on moderate to high difficulty tasks usually lead to positive self-concept, feelings of competence, acceptance of responsibility for one's performance, and high drives to achieve.

The major aspect is personal responsibility. That is, to the extent that students accept personal responsibility for their performance, they will be emotionally involved, success will enhance their self-concepts, and motivation will come from within, rather than being attributed to external forces.

14

SECTION III

THE USE OF MOTIVATIONAL TECHNIQUES IN INSTRUCTION

In this section we will be dealing with some extrinsic motivational factors that an instructor might want to use to increase student motivation. These motivational techniques are quite straight-forward and do not call for making sweeping changes in a course or program.

Verbal Reinforcement:

Verbal reinforcement refers to the instructor providing oral or written comments regarding the merit of the student's performance. Simple comments such as: "way to go", "well done," or "A beautiful paper" can be excellent motivators. Providing written or oral praise when a student's performance comes up to a particular level increases the probability that the student will work hard to achieve at that level or better on future tasks. Although this type of social approval can be very effective as a motivator, there are wide individual differences in student responses to this type of reinforcement. For example, the shy, withdrawn, virtually non-verbal student generally responds favourably to verbal reinforcement. On the other hand, the out-going, self-confident student very often responds better to statements that imply that you expected a much better performance from them. We also want you to be aware that there are vast individual differences in the effectiveness of verbal reinforcement as provided by different instructors. In other words, some instructors are very effective with the use of verbal reinforcers, while others using the same technique appear to produce little or no motivational change.

The Element of Surprise:

When things in a course or program have become routine and rather "ho-hum" in nature, this should indicate to you as the instructor that it is time to come up with something startling to get the students motivated. For example, if you ordinarily present material through the lecture method, shift over to a discussion format. A technique that some instructors have found to be

effective is the "Infinite Bag of Knowledge" approach developed by Bob Mager. In this technique, the instructor is the "Infinite Bag of Knowledge". However, instead of presenting a well-organized set of lecture material, the students ask for the information that they want from the "Infinite Bag." Of course, for this approach to be effective, the students have to be supplied with a set of objectives as to what is expected of them.

Utilize Familiar Examples:

A very simple way of getting students involved and motivated in course or program material, is to use examples from everyday real-life situations. People from the local area who are using particular methods and procedures, rather than some fictitious persons who may have done the same thing. When students are able to understand that people in the area are doing the things that you are dealing with, it brings the subject matter into a realistic perspective, rather than continually referring to something that is happening in New York, Moscow, or Hong Kong.

Games and Simulations:

With the advent of the computer becoming a standard piece of equipment in most schools and colleges, games and simulations of real-life situations have become an excellent means of getting students motivated and involved in course or program material. Many different types of "canned" games and simulations are on the market already. These, of course, can be supplemented by your own creativity as you become more adept in utilizing the computer as an adjunct to instructional procedures.

Using Test Results and Grades:

While the arguments regarding the purposes of testing and grading students will probably continue on ad nauseum, the bottom line is that test results and grades are the foundation for various types of social reinforcement and as such can be powerful motivators of student behaviour if used properly. Test results and grades are tied into many factors, such as: approval from parents, fellow students and oneself, licencing, certification, better jobs and more

interesting work. These and related factors involve grades and test results as incentives and hence, they become very effective motivators of student performance.

Before you run out and go wild with the use of test results and grades as motivational tools, you have to remember that not all students are oriented toward this type of extrinsic motivation. Students that value grades and test results will probably be motivated to improve their learning as a result of the feedback they receive. However, the intrinsically motivated student may respond in a negative manner by decreasing the amount of effort they are willing to expend.

The major factor involved in employing test results and grades as motivators appears to be in the way in which these tools are used. The instructor who uses test results and grades as a means of providing feedback to the students about their performance will probably find this approach to be effective. On the other hand, the instructor using these results and grades as a form of punishment will also produce motivation, but it will be in the form of frustration, which is non-productive for the academic setting.

Transfer of Learning:

The transfer of learning or transfer of training technique has been an excellent tool for enhancing the motivation to learn. The main factor involved in this technique is that the instructor builds into the student a "set" or expenctancy that the material that the student is learning at this time will be of value in future components of the course or program. Transfer of learning or training is readily accomplished in the trade, technical and education areas, as most of the things the students are learning under the supervision of the instructor are the same kinds of things they will be doing once they have their ticket, diploma or degree. For example, the apprentices, student nurses, or student teachers are doing almost the identical things under supervision of the instructors as they will be doing as journeymen, nurses, or teachers.

To bring about transfer of learning or training in other academic areas calls

for the utilization of principles and generalizations learned in one setting being applied in the new learning situation. Once the student realizes that these principles and generalizations have a connection with things to come, the motivational level increases very rapidly.

Dealing with Competing Motives:

For a variety of reasons, the occasional student appears to have a real need to put down the instructor, turn in very poor work or generally create disruptions in the course or program activities. The reasons may be displaced aggression, feelings of inferiority, a means of getting attention or acceptance, as well as numerous other possibilities. Obviously, the instructor has to do something to get these behaviours turned around as quickly as possible. Probably the most successful way of bringing about a change in the student's behaviour pattern is to reinforce behaviours that are incompatible with the undesirable behaviours.

At the college level, punishment does not go over too well, especially if the student gets "chewed out" in front of the rest of the class. There are, however, some other possibilities for action. For example, the need for approval from fellow classmates is not compatible with the need for approval from the instructor. Hence, as you the instructor provide more reinforcement for that student's behaviour, the need for approval from the peers becomes less and less important. A very common problem at the college level is the student that has to work to get the money to continue attending college. Often the work interferes with the student's academic performance and must be dealt with before the student is able to perform at a reasonable level.

Reducing Negative Factors in the Instructional Setting:

In any type of instructional setting, the general ideal is that we want to reinforce the student for his or her work toward the objectives of the course or program. In order to accomplish this goal, there are a number of negative factors that have to be reduced so the student may work toward the objectives with the least possible effect of these negative factors. Listed below are some of the common negative factors that have to be dealt with in the

instructional setting. Please note that these are some of the factors. The list is not intended to cover all possible negative factors.

- Being graded on a curve, where the student's efforts to achieve the objectives does not make a difference, as only a certain percentage of the students will get the A's and B's.

- Where the student's request for assistance from the instructor is not given any attention.

- When the instructor talks down to the students assuming that they are stupid and couldn't understand the more difficult concepts.

- Having an instructor who is bored or burned-out and is not interested in the course material.

- Having to sit for long periods of time while the instructor goes on and on just trying to fill in the time.

- Walking in to take an exam that is not based on the objectives for the course or the material that was covered in class.

- Attempting to learn material that is way over the head of the stuuent.

- The instructor is not taking into account the entry level of the students.

- Taking a test that is based on trivia rather than the real course content.

- Where the instructor has set his/her pace for the really good students and does not seem to care if the rest of the class learns the material.

- Not getting exam results or papers back for weeks and weeks after they were turned in.

19

SECTION IV

THE INFLUENCE OF SOCIAL CONDITIONS ON MOTIVATION

Obviously, any motivational procedures employed by the instructor are carried on in a social setting. While there are many social conditions that can have an effect on both instructors and students, we are only going to deal with two of them: The social influence of students and instructors and the social atmosphere in courses or programs.

The Social Influences of Students and Instructors:

In any kind of social situation, especially in education, people are attempting to influence the behaviour of other people. In the educational setting, the instructor is attempting to motivate the behaviour of his/her students. The point you have to remember is that while the instructor is trying to influence the behaviour of his/her students, the students in turn, are trying to motivate or influence the behaviour of the instructor. There are five basic types of social influence that can operate in any kind of social setting. They are: The influence of the: expert, reinforcement, reference, coercion, and realistic.

Expert influence refers to the influence an instructor has over his/her students by having the skills, knowledge and expertise in a particular subject area. The students respond because the instructor is an expert in an academic or technical area.

Reinforcement influence is defined as a person having control over another person's opportunity for reinforcement. In the academic setting, the instructor has control over the student's reinforcement in terms of evaluation and grading, thus, the instructor is in a control position to motivate the students by providing or withholding reinforcement.

Reference influence has a motivational component that is based on one person changing his or her behaviour pattern because they want to be like another person who is greatly liked and admired. In this case, the students will put

forth greater effort for one instructor because they feel that instructor is a special kind of individual.

Coercion influence occurs when one person is in control of the punishments that can be administered to another person. In the academic setting, the instructor is able to motivate students through the ability to give poor or failing grades to the student.

Realistic influence is defined as the ability to motivate another person's behaviour because you have been granted this influence through legislation or custom. In this sense, the instructor has the opportunity to influence the student's motivation by being granted control over student behaviour in the classroom.

As you can see, instructors have all five of the social influences going for them in attempting to get their students motivated. However, the instructional situation is a two-way interaction system where the students are able to influence the motivation of the instructor. Student behaviours that motivate instructors in a positive way are: class participation, completing assignments and showing a genuine interest in the learning process. Students can also influence instructor motivation in negative ways, such as: non-attending to the topics at hand, not doing assignments and not caring whether they learn or not.

In summary, the behaviour of both instructors and students is influenced by a variety of social factors.

The Social Atmosphere in Course or Programs:

A college is in effect a small social unit that has its own social atmosphere which produces various types of motivational conditions. The instructor needs to have an understanding of the social atmosphere as it will be involved in influencing motivation within his/her course or program.

While a number of factors contribute to the social atmosphere in a course or program, one of the major influences will be how the students perceive

themselves. That is, if the students perceive themselves as hardworking, serious students, a very positive academic-oriented atmosphere will prevail. If on the other hand, the students perceive themselves as socially-oriented with little interest in academics or training, a very poor atmosphere will evolve. Obviously, the motivational pattern that develops from these two situations will present vastly different challenges for the instructor.

The group of students perceiving themselves as hardworking and serious will have a high level of motivation to learn and the instructor can get into the course or program material with little difficulty. The group of students perceiving themselves as the college socialites will present the instructor with a serious problem. In this situation the instructor is using all of his/her energy to get the students motivated with little time and effort left over for working on the course or program material.

22