1 Anxiety in Classroom Situations

The teaching and learning of some subjects in classrooms are often characterized as catering to the cognitive needs of students while ignoring their emotional responses. It is not unusual for teachers of a subject such as mathematics to overlook the affective factors and diagnose any student difficulty in the learning process as a cognitive problem. Through my experience as a student and then as a mathematics teacher, I found that there were some of us who liked doing mathematics as a source of enjoyment and there were some who perceived the subject as difficult and dreadful.

Teachers often come across capable and diligent students who are exasperated over their own performance. They think they have understood everything but when it comes to doing problems posed by the teachers in the classroom, either on the chalkboard or as a form of assessment, many of them fail to achieve to expectation. Emotional responses like bewilderment, frustration, embarrassment or disappointment, which can be identified as symptoms of anxiety, are manifested in their behaviour. Amongst the less enthusiastic students, boredom and withdrawal in the form of inattentiveness or daydreaming are underlying responses that characterize students' anxiety states. Stomach troubles, giddy spells or mental 'black-outs' are usually the reasons given by students who fail to turn up for tests or examination.

There is a growing concern among educators about the effect of anxiety that inhibits learning and limits the potentials of students in their overall development. I believe that most traditional classroom situations create a breeding ground for anxiety in our students. The policy of streaming on the basis of academic competition through tests and examinations is most likely to foster anxiety. Students are expected to adjust to the school rather than the school adjust to the students. Competitive
evaluation which ignores varying individual differences in ability often begins in the first grade and continues throughout school. Students are encouraged to enhance themselves by demonstrating their superiority over their fellow students which gives rise to widespread feelings of personal inadequacy. Some students may eventually convince themselves that school is not the place for them, that it is a place of threat and anxiety.

Students are frequently exposed to common events in the classroom that in many ways are stressful and threatening especially for the less well-adjusted. Very often teachers set tasks for the students with the explicit instruction that they are testing students' performance and intelligence on how much they have understood the lessons. This exerts a great influence over students' performance if they know or believe that the task is a measure of their abilities. It can be assumed that most teachers believe a task such as a test, must be made moderately difficult in order to separate the good from the weak who are required to do the same task as their better counterparts.

In addition, schools are generally run by the 'bell' according to the class time-table, stressing the limited time available to students working on a task at hand. This heightens the tension. Teachers anxious to 'cover' the syllabus and pressed for time, hurry through a lesson leaving students bewildered. Grades and report cards to parents add to the part of school-life that threatens students' self-esteem and confidence.

Let us consider a description given by a student about to take a final examination. It proceeds as follows:

"When I think about the exams . . . I really feel sick. . . so much depends on it. I am trying very hard to study all the materials and I must pass it with good grades. I've heard about this teacher setting tricky questions . . . God, my parents! What will they think if I fail? Oh! my father will be so disappointed — he always has such great hope for me. What am I going to do if I can't pass and go into university? I know I can answer those questions but each time when I received the examination papers, I would feel so tense and
my hands shook so much that I forgot what I had learnt. How I wish exams didn't bother me so much!"

Generally most people will perceive that this student is afflicted with symptoms of anxiety.

Many will agree that we live in a test-conscious, test-giving culture in which the lives of people are in part determined by their test performance. In an education system, where emphasis is placed on successful performance from an early age, it is not surprising that 'achievement anxiety' is a pervasive phenomenon in our culture.

2 Some Theoretical Concepts of Anxiety

In the last two decades, research on anxiety has rapidly increased in importance. Many psychologists have regarded anxiety as a significant cause for such diverse behavioural consequences as insomnia, antisocial acts, instances of creative self-expression and idiosyncratic mannerisms of an endless variety. What then is this anxiety phenomenon and is there a general notion to explain its existence and cause? Different investigators have different conceptualizations of the term "anxiety".

Freud (1936) was the first to attempt to explain the meaning of anxiety within the context of psychological theory. He regarded anxiety as "something felt", an unpleasant affective condition accompanied by physiological conditions such as heart palpitation, nausea, muscular tension, vertigo and breathing difficulty. These qualities could be seen in the case of the anxious examination student mentioned earlier. According to him, the anxiety endured by normal people was qualitively different from the anxiety endured by neurotics. The anxiety of everyday life which he called "realistic" or objective anxiety referred to certain objects in the real external world and was synonymous with what was usually known as fear.
As both the amount of anxiety and variety of situations in which it is experienced vary from person to person, it is essential to analyse anxiety in terms of situations and the individual's interpretation of them. Sarason (1978) broadly defined the characteristics of anxiety responses and the situations in which they are experienced as follows:

(i) The situation is seen as difficult, challenging and threatening.
(ii) The individual sees himself as ineffective in handling, or inadequate for the task at hand.
(iii) The individual focuses on undesirable consequences or personal inadequacy.
(iv) Self-deprecatory preoccupations are strong and interfere or compete with task-relevant cognitive activity.
(v) The individual expects and anticipates failure and loss of regard by others.

These characteristics can be experienced in well-defined situations like examinations, job-interviews or speaking in front of an audience, which can be stressful to individuals who feel unable to respond adequately. Or it might be linked to a wide range of situations defined in idiosyncratic ways such as in interpersonal relationships with certain peer-groups, family members, members of the opposite sex; or in situations requiring verbal, mathematical, spatial or motor skills.

While everyone experiences anxiety from time to time, there are substantial differences among people in its frequency and its intensity. In the learning situation, we would expect to find some students who may be anxious in many different situations and circumstances, while others will rarely experience it. Or there are instances where a student who has a flair for English but is weak in Mathematics, would probably have very little anxiety when faced with an English test, but might be very tense in a Mathematics test. Spielberger (1966) proposed the state-trait theory to distinguish two related and yet logically different constructs of anxiety: anxiety as a transitory emotional state or a personality trait. When we say that a person is 'anxious',
we may interpret this as meaning either he is anxious at the moment or that he is an anxious person.

3 Anxiety as an Energizing Drive in Learning Situations

Some experimental psychologists in the area of learning have regarded anxiety as a principal drive in human behaviour. Drives, according to basic concepts of learning, are motivating forces. Dollard and Miller (1950) postulated that one of the most important secondary drives in human behaviour is conditioned fear or 'anxiety'. In the learning process, the number of secondary drives that can be acquired in the organism is unlimited. The acquiring of such drives is mediated by reward and punishment, in the broadest sense of these terms. Anxiety is acquired through the association of such physiological avoidance reactions as increased heartbeat, perspiration, dryness of throat, feelings of faintness, nausea, more frequent urination etc. These reactions are mediated by the autonomic nervous system.

If we consider human striving for success and acceptance as a drive, then the example of a student striving to succeed in, say, a mathematical task but meeting with failure,

- can be seen as failure leading to aversion towards the subject, accompanied by anxiety reactions such as feelings of uneasiness or panic.
- results in him striving to be rid of his anxiety by finding ways of avoiding the subject.
- this anxiety thus becomes a secondary drive and its reduction has the property of reinforcement.

Anxiety can be a pervasive phenomenon because its reaction to a stimulus is extended in two ways: stimulus substitution and stimulus generalization. In the former, the individual may learn to fear not only the stimulus itself but also things associated with the stimulus. For example, if the failure in mathematics is accompanied by disapproval from the teacher, then the individual will fear the teacher as well. To lose this fear, he may stay away
from lessons altogether. Anxiety is also extended through generalization by individual learning to fear objects or conditions that are similar to the original stimulus. For example, anxiety towards a subject like mathematics is often extended to other subjects in schools that require some mathematics knowledge such as Physics or Statistics.

Spence (1964) conceived of anxiety as an acquired drive which had the capacity to energize the organism. Anxiety can facilitate performance and increase the speed of learning, only if the learning task is simple. As in the case of one-response situations where there is no choice of responses, such as conditioning of eyelid reflex, a high anxiety level should, by energizing the individual to behave, facilitate learning. But in most human learning, tasks are complex and involve a variety of possible responses available to the learner. Each of these response tendencies or 'habits' has a certain strength or probability of occurrence, depending upon the individual's past experiences.

Take a straight forward learning task like word association, matching the word 'low' to the stimulus word 'high'. Even though most people have been exposed to other associations with the stimulus word, like 'high-mountain' or 'high-light', the word 'low' has doubtless occurred many more times in the past and thus has a greater habit strength. Anxiety will energize the correct response to a greater extent than it will the incorrect ones, and will thus increase the speed of learning. However in a complex situation where there are a number of competing response tendencies, all of which are equally weak in habit strength, anxiety tends to hinder learning as it also energizes the habit strength of many incorrect responses.

4 Test Anxiety

In a test situation, Mandler and Sarason (1952) hypothesized that two kinds of drives are evoked:

(i) a learned task drive directed towards completion.
(ii) a learned anxiety drive that elicits responses related to task completion or responses that interfere with task completion.

The latter task-irrelevant responses which are self-centred, may be manifested as feelings of inadequacy, helplessness, heightened somatic reaction, fear of failure or loss of status and esteem, and implicit attempts at leaving the test situation.

So very often we have come across students who, while quite able and bright, are virtually terror-stricken at examination time. One of the difficulties experienced by these highly test-anxious students is the harmful intrusion during examination of task-irrelevant cognitive reactions to stress. Whereas most students read test questions and proceed to answer them, highly test-anxious individuals find themselves thinking about the consequences of failure, how much better prepared the other students are, or other self-deprecatory preoccupations. Such students also show physiological reaction patterns that go along with worry such as stomach-cramps, sweaty hands, nausea, etc.

Wine (1982) in her research on effects of test anxiety concluded that:

Highly test-anxious persons typically perform more poorly on tests than do low test-anxious persons, particularly when the tests are administered under stressful, evaluative conditions. The difference in performance is largely due to difference in the attentional focuses of high and low test-anxious persons during task performance. The low test-anxious person is focused on "task-relevant variables, while the highly test-anxious subject is internally focused on self-evaluative, self-deprecatory thinking and perception of his autonomic responses. Since the difficult tasks on which the test-anxious does poorly, require full attention for adequate performance, he cannot perform adequately while dividing his attention between internal cues and task cues.
How to Combat Anxiety in a Classroom?

Most studies on anxiety support the notion that high anxiety hinders performance especially for the less capable students. Whatever the findings of research on anxiety in learning situations, they are aimed to furnish teachers with a deeper understanding of their roles in helping students to develop positive attitudes towards learning. What approaches then can a teacher in a normal everyday classroom situation use to combat, if not prevent anxiety in students?

Teachers could change the class atmosphere from one of tension and competition to one of trust. A way this might be done is to replace the conventional hierarchical teacher-student relationship with that of relative equality, that is, on group building during class sessions. Workshops with anxious students can be conducted during which teachers and students all tell about their fear and frustrations.

Teachers could create a supportive atmosphere in the classroom, even at the cost of less coverage. They should not reject off hand a "wrong" answer, but try instead to promote a positive attitude to errors, that students should not be ashamed, but accept them as an essential part of the learning process. Teachers should share personal experiences with students about learning, related careers and other everyday activities.

Teachers should be able to recognise individual differences in learning. In mathematics, for example, teachers should recognise that one of the differences between the mathematics-anxious and the mathematics-able is in their reaction to frustration in mathematics. Problem-solving requires patience and a willingness to attempt different approaches. Teachers should take a non-authoritarian view of mathematics by encouraging students to discuss with each other possible approaches or to try to make up problems for each other.

Rote learning should be discouraged and teachers should do everything possible to promote understanding. Sometimes students have a fear of a subject which has been built up by their
misunderstanding, nonunderstanding and failure during previous lessons, and this anxiety has to be resolved before any systematic learning can be attempted.

Teachers could reduce the threat of tests by making sure that they are not too difficult, by explaining clearly exactly what is to be tested and by not springing tests on students. The emphasis should be on mastery, allowing retesting if necessary. Ample time should be allotted for students to complete tasks. Teachers could help by not emphasizing the importance of tests and announcing marks to the whole class.

Anxiety about tests is not restricted to the examination room. Many students begin to feel anxious days before a test, especially if they are not well prepared. Anxiety is probably in part the cause of, and in part the effect of ineffective study habits. High test-anxious students waste a lot of time with self-centred 'interfering anxiety responses during task performance.

It is important that teachers help to inculcate good study habits and basic skills so that students might attend to the task rather than to their own anxiety reactions. The suggestions presented above are within the capacity and control of any teacher who wishes to reduce anxiety and lead students to better achievement.

References


