



Application Of Motivational Strategies On Enhancing Students' Achievement In Science

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ABSTRACT

For effective learning of a science subject, effective teaching is necessary. Though many environmental factors play their roles in the learning process, teaching also plays its major role. The learning of subject appears easy because the child is eager or naturally motivated to learn the subject. In teaching a subject, the teacher's primary task is to rouse in his / her pupils a strong desire to learn the subject and has to keep up the motivation at or fairly satisfactory level through the lesson. This paper highlights motivational strategies to enhance the students achievement in science. An experimental study was conducted to 45 students of X Standard. It was found that motivational strategies enhanced the achievement of the learners. The findings revealed that there is significant mean difference between the pre-test and post-test scores of the experimental group and there is improvement in the students achievement in science due to the application of motivational strategies.

Keywords : Motivational Strategies, Students' Achievement, Environmental Factors, Learner Factors

Introduction

In teaching learning process the learners active participation is very important. The success of teaching not only depends upon the effective teaching of the teacher but also the effective learning of the part of the learner (Akaori, 1991). Therefore all possible efforts should be taken to enhance achievement of the learners. Motivating students towards classroom goals is one of the most important roles of the teacher. Theories of motivation are useful tools to help us to understand why behaviours occur and persist, and to direct us in finding practical tactics for emerging students. Behaviourists concentrate on how the environment induces behavior and are generally more concerned with extrinsic motivation, whereas cognitive and humanist theorists place more importance on internal or intrinsic motivation (Misra & Girishwar, 1989). Hence a necessity arises to know about the motivational strategies.

Motivation And Learning

The motivation is concerned with the factors which determine the direction, intensity and persistence of behaviour related to learning and achievement in academic framework. Analysis of the extensive research in this area shows a consistent relationship between motivational factors and achievement and suggests that motivation plays an important role in determining the level of achievement at all stages of academic study (Mulia, 1990). Indeed, motivation is generally considered as a necessary condition for learning and behaviour.

The factors contributing to the successful learning of subject can be listed into three groups. They are

- 1) Learner factors
- 2) Teacher factors
- 3) Institutional factors

Of these, the learner factors are the most important.

The learner factors are as under

- 1) Learner's motivation
- 2) Attitude towards target subject
- 3) The amount of effort made by the learner to learn the

subject

- 4) The amount of time spent on learning the subject
- 5) The subject learning strategy adopted by the learner
- 6) The quality of target subject to which the learner is expected.

Motivation spends up in the learning process and creates interest. Motivational factors are critical in determining the achievement of students (Dowson & Martin, 1998). We can improve the achievement of students in science by employing the motivational strategies in the teaching process.

Need And Importance Of The Study

The level of attainment of our students in science is a cause for great concern. Among a number of factors responsible for this, sorry to state of affair, the most important is lack of motivation. On the part of learners, it is pitiable and almost paradoxical that the basic importance of motivation in the field of education is not sufficiently paid heed in India. Motivation is a complex phenomenon influenced by multiple variables operating within the organism and in the environment. Motivation factors influence the individual effort to succeed academically. The main function of the teacher is to create learning environment in the class. An effective teacher can create the environment that motivates the students to learn.

Significance Of The Study

Many educational experts are of the view that the way a child is taught is atleast as important as what is taught. Most of the students at the high school experience difficulty in science. Ways and means must be found out to relate the teaching of science closely to every day life. It is pointed out that many students have developed an adverse attitude towards science. What is needed is the application of modern methods and approaches to make the instruction a joyful activity in the classroom especially to the students. Motivational strategies of teaching approaches induce all the student to work together on the basis of the team effort, participation of all learners help to shed out their hesitation and inferiority complex.

Motivational achievement not only develops the intelligence of the students but also equally contribute to the social and psychological development of the learners unlike other methods of instruction. Thus motivational strategies fulfil the hopes and aspiration of individuals and society. In this context any research in achievement of motivation strategies of teaching approach becomes significant.

Motivation plays an important role in enhancing the achievement of the student. Mind is not mechanical especially students behaviour are very peculiar in nature. Learning and teaching will be effective if only some motivation efforts are taken. The total motivation to learning depends upon contribution of intrinsic and extrinsic motivation. So it is significant to apply motivational strategies in teaching approach definitely will yield success.

Delimitations Of The Study

Motivational strategies can be grouped into two types of factors such as personal factors and environmental factors. The classroom teacher has no control over personal factors like intelligence, ability, aptitude, value, etc. In this study the researchers concentrate only on environmental factors and not on such factors broadening in personality traits. The researchers applies only the 10 motivational strategies as formulated by personal experiences. The study is limited to X standard students of Alagappa Model Higher Secondary School, Karaikudi. The study is limited to identifying the increase in the level of achievement in science only. The study is executed only for 30 days. Not all the motivation strategies (environmental factors) are employed. Only a few of the environmental motivation strategies are applied while teaching. The study is conducted in the school where the subject is the medium of instruction in English.

Motivational Strategies

The following motivational strategies are applied in the experimental sessions.

- 1) Begin the lesson by giving students a reason to be motivated.
- 2) Understand the social climate of the school
- 3) Make students what they have previously learned
- 4) Tell students exactly what they want to accomplish
- 5) Capitalize on the arousal value of suspense in discovery, curiosity and exploration
- 6) Minimizing the attractiveness of competing motivational system
- 7) Use simulation and games
- 8) Use familiar material for examples.
- 9) Use unique and unexpected context when applying concepts and principles
- 10) Have students set short-term goals.

The above motivational strategies influence the individual efforts to succeed academically. The function of the teacher is to create learning environment in the class. An effective teacher can create the environment that motivates the students to learn.

Objectives

The objectives of the study are as follows:

- 1) To identify the problems experienced by learners in learning science.
- 2) To identify the present level achievement of the X-standard students in science.
- 3) To identify and to apply motivational strategies in

teaching science

- 4) To measure the effects of motivational strategies on enhancing the level of achievement of the students in science.

Hypotheses

In the light of the objectives, the following hypotheses were set up for the present study.

- 1) There exists no difference between the pre-test mean scores of experimental group.
- 2) There is no significant correlation between performance of students and application of motivational strategies.

Phases Of Research Schedule

Phase I	Selection of the Sample
Phase II	Identification of the experimental group : 45 students were selected for the study
Phase III	Students were given pre-test
Phase IV	Experimental sessions were carried out for five weeks
Phase V	Similar pattern of test (post-test)
Phase VI	The non-parametric technique to determine the effect
Phase VII	Testing hypotheses and interpreting the results
Phase VIII	Findings and identifying educational implications

Research Procedure

The experimental method was adopted single group design that is pre-test, post-test experimental designs were used. A total of students 45 X standard students were taken as sample in the experimental group. Motivational strategies were applied and the experimental sessions were conducted for 5 weeks with lessons selected from science subjects. The scores of students of the experimental group was tabulated. Appropriate statistical techniques were applied to identify the impact of motivational strategies with reference to teaching science.

- 1) There is significant mean difference between pre-test and post-test scores of the experimental group.
- 2) There is an increase in the students achievement in science due to the motivational strategies.

Conclusion

Research in motivation methods indicated that team rewards and individual accountability are essential elements for producing basic skills. High achievers also gain from motivational strategies just as such as do low achievers and average achievers. Effective improvement in academic achievement, positive inter group relations and self esteem are some of the educational outcomes of motivational strategies.

Motivation and learning together will make effective classroom management. In the educational area, if at all there could be any improvement in the educational development of students, it could be done so only through the application of employing motivational strategies and could be of permanent nature. The wide spread and growing use of motivational strategies are practical and attractive to the teachers also.

In order to be a successful science teacher, he / she should update his / her equipment and expertise by keeping abreast of the latest developments in the field of science teaching with enthusiasm, inventiveness, fact and love for his/her students. He/she should continuously search for new strategies and use them. So that his/her teaching may become more interesting and effective. He/she should employ such strategies as will electrify them. So, the motivational effects fulfill the hopes and aspiration of individuals on enhancing academic achievement as well as in students society.

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