

**EFFECTIVENESS OF BLOOM'S MASTERY  
LEARNING MODEL ON ACHIEVEMENT IN  
ECONOMICS WITH RESPECT TO ATTITUDE  
TOWARDS ECONOMICS**

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*The present study investigates the effectiveness of mastery learning model on achievement in economics with respect to attitude towards economics. The sample was drawn of IX<sup>th</sup> grade students from two different schools of Chandigarh (U.T.), affiliated to CBSE. Instructional material based on mastery learning model was prepared and implemented to the experimental group after pre-testing and gain scores were computed after post- test for all the students. Attitude scale was also administered. A 2 x 2 two way analysis of variance was used to arrive at the following conclusions: (i) Mastery learning model group was found to attain significantly higher achievement scores as compared to control group, (ii) Performance of students with attitude towards economics through mastery learning model was found significant, (iii) No significant interaction effect was found to exist between the two variables.*

**INTRODUCTION**

Teaching is an activity which is designed and performed for the attainment of some broad goals or a large number of specific objects in terms of change in pupil's cognitive structure and behaviour. Teacher in an experimental situation may use a simple model. But in actual practice no teacher sticks to one model. There are various models of teaching. Models are prescriptive teaching strategies designed to accomplish particular instructional goals (Eggen, Kauchak & Harder 1979, p.41).

“Model of teaching” is a blue print of teaching activities which is needed to generate educative environment within the frame work of task in hand. Models of teaching try to describe teaching as it ought to be. Psychologists are of the view that the best substitute for a theory of teaching is a model of teaching which explains various teaching learning conditions and their relationship. When we teach well, we help students learn well. Powerful learners have repertoires of powerful strategies for acquiring education. Models of teaching are designed to impart repertoires while helping students learn information, ideas, academic skills, developing social skills, values and under-themselves and their environment (Joyce & Weil 1990, p.32). The models of teaching are grouped into four characteristics on the basis of sources of realty which the theorist has drawn as they focus on the learner and his/her environment. These four categories are social interaction sources, information processing service, personal sources and behavior modification as a source.

Mastery learning is one of the models of teaching under the behavioural systems family of models (Joyce & Weil 1985, p.28). In mastery learning, primary emphasis is on reinforcement, stimulus control and immediate feedback (Deshpande 1966, p.50). Mastery learning is based on the belief that any teacher can virtually help all students to learn excellently, quickly and self confidently. Mastery learning believes that it can be implemented simply by modifying traditional group instructional procedures to ensure that some students have more time and they receive appropriate additional instruction according to the result of the formative evaluation (Bloom 1971, pp.37-41).

Mastery learning offers a powerful new approach to student learning which can provide almost all students with the successful

and rewarding learning experiences. It purposes that almost all students can master what they are taught. Further, it suggests procedures whereby each student's instruction and learning can be managed within the context of ordinary group-based classroom instruction so as to promote his/her fullest development. Mastery learning makes student learning more efficient than conventional approaches. Mastery learning differs from traditional curricular programmes. The emphasis is on assuring that every student achieves or 'masters' the curriculum and only moves ahead once demonstrating an acceptable level of performance. Mastery learning helps students to learn more content in less time. It also helps in developing learner's interest and attitude towards the subject taught than usual classroom methods. Mastery learning has an impact on the affective outcomes of education like modification in self-concept and to some extent development of positive attitude towards the subject. The mastery learning approach came into practice in the decade though the concept is an old one. Mastery learning has been defined in a variety of ways (Bloom 1968, pp.1-8).

Mastery learning has been widely applied in schools and training settings and research shows that it is helpful in improving instructional effectiveness. On the other hand, there are some theoretical and practical weaknesses including the fact that people do differ in ability and tend to reach different levels of achievement. Furthermore, mastery learning programmes tend to require considerable amounts of time and effort to implement which most teachers and schools are not prepared to spend. The mastery learning model is closely aligned with the use of instructional objectives and the systematic design of instructional programme. The criterion referenced instruction model of Mager is an attempt to implement the mastery-learning model. In addition, the theoretical

framework of Skinner with its emphasis on individuals learning and the importance of feedback are also relevant to mastery learning.

An attitude is a hypothetical construct that represents an individual's degree of like or dislike for an item. Attitudes are generally positive or negative views of a person, place, thing or event. It is the guiding force behind all human activities. It is our perception of life. It's the way we view things around us. The term attitude is defined as a pre-disposition involving beliefs, feelings and dispositions to act towards some object. An attitude is always a stand or position which an individual takes towards a person or an issue. Cognitive, affective and behaviour are three components of attitude. Cognitive component (thinking) represent the beliefs that one has about an attitude object, implying thereby how we evaluate the characteristics of a person, object or place. This evaluation can be positive or negative. Affective components (feeling) deals with the way one feels about the attitudinal objects. This concerns the emotional feeling people have towards an issue, reflected by their favorable and unfavorable evaluation of it. Behaviour component refers to the observable behaviour shown by the people as a means of expressing their beliefs and feelings on an issue.

A pre-disposition is an inclination or tendency towards something. Attitudes guide behaviour and thinking. They guide the way people think, feel and act. They are learned from personal experience, information provided by others and market controlled sources, in particular exposure to mass media. During the process of attitude formation and also after this process, attitudes may be changed and modified through various influences. Some attitudes are more resistant to change while others are more amenable to change.

Once developed, the attitudes that a person holds can be highly resistant to change. But, under certain conditions, attitudes may be altered. The reasons for attitude change are numerous. Advertising agencies and other groups of people, such as educators and politicians work hard and try to change other peoples' attitude (Allport 1935, pp.798-806).

The studies of attitudes are helpful in guiding behaviour. Attitudes as tendencies to act and serve the very important function of mediating between and integrating basic psychological process such as motives, perception, feelings and so on. The attitude surveys, rating scales, behavioural measures and unobtrusive measures are some of the techniques to measure people's attitude.

#### **NEED AND SIGNIFICANCE OF THE STUDY**

The proper teaching strategies help teachers in solving learners' problems and bring remarkable improvement in their overall behaviour. Review of the literature shows that use of various teaching strategies gave quite positive results in comparison to traditional teaching methodology. While teaching high school economics students, it was found that conventional method was not very effective. An attitude towards economics affects how students go about studying it. The studies of economics prepare students for various vocations like banking sector, trade, economic management, planning, agriculture or industry etc. Therefore, the investigators made an attempt to enquire into the effectiveness of Bloom's mastery learning model on achievements in economics with respect to attitude towards economics.

#### **DELIMITATION**

The study was delimited to IX<sup>th</sup> class economics students from two government schools of Chandigarh only.

### **OBJECTIVES**

1. To compare the performance of groups taught through mastery learning model and conventional method of teaching.
2. To study the performance of students having different levels of attitude towards economics.
3. To examine the interaction effect between model's approach and attitude level.

### **HYPOTHESES**

H<sub>1</sub>O The performance on economics of mastery learning model group will be higher than the conventional group.

H<sub>2</sub>O The performance of high attitude group will be higher than the low attitude group.

H<sub>3</sub>O The Performance through mastery learning model of teaching does not interact with attitude group.

### **METHODOLOGY**

It is necessary to adopt a systematic procedure to collect the necessary data which helps to test the hypotheses of the study under investigation. Various steps of research methodology followed in the present study are as follows:

#### **Sample**

The study was conducted on a random sample of 100 IX<sup>th</sup> class economics students - 50 students from Government Senior Secondary School, Dhanas and 50 students from Government High School, Sector 24, Chandigarh. It was purposive sample.

#### **Design**

For the purpose of present investigation, a pre- test and post-test factorial design was employed. In order to analyse the data a 2×2 analysis of variance was used for the two independent variables

viz. instructional treatment and attitude towards economics. The impact of teaching model was examined at two levels, namely mastery learning model and conventional teaching. The variable of attitude groups was studied at two levels viz. high and low attitude groups. The main dependent variable was performance gain which was calculated as the difference in post- test and pre- test scores for the subject.

### **Tools**

1. Instructional Material prepared in accordance with the mastery learning model and conventional teaching method on the segment of Economics.
2. Achievement Test in Economics prepared by the investigators.
3. Attitude Scale towards Economics developed by the investigators.

### **Procedure**

After the selection of the sample and allocation of students to the two instructional strategies, the experiment was conducted in four phases i.e. *Firstly*, the attitude scale was administered in each school, in order to identify for measuring the student's attitude towards economics. *Secondly*, a pre-test was administered to the students of both the treatment and control groups. The answer-sheets were scored to obtain information regarding the previous knowledge of the students. *Thirdly*, one group was taught through mastery learning model and control group was taught through conventional method of teaching by the investigator. *Fourthly*, after the completion of the course, the post- test was administered to the students of both the groups. The answer-sheets were scored with the help of scoring key. Time limit for the test was one hour.

### **ANALYSIS AND INTERPRETATION**

The data were analysed to determine the nature of the distribution of scores by employing mean and standard deviation. The two way analysis of variance was used to test the hypotheses related to strategies of teaching and attitude level. The mean and standard deviation of different sub groups have been presented in Table 1. It was found from this table that the mean scores of mastery learning model (M=9.68) was higher than the conventional method of teaching (M=6.98). This shows that mastery learning model was more effective than the conventional method of teaching. It was also confirmed that the high attitude group had higher mean score as compared to the low attitude group. It was concluded that the gain mean with mastery learning model was more for high attitude group than for low attitude group. This difference was also found in respect of the two attitude groups taught through conventional method of teaching.

**Table 1**  
**Means and SDs of achievement scores for different sub groups**

Attitude Groups	Teaching						Total		
	Mastery Learning Model			Conventional Method			N	Mean	SD
	N	Mean	SD	N	Mean	SD			
High Attitude	25	10.48	3.01	25	7.56	3.87	50	9.02	3.73
Low Attitude	25	8.88	3.70	25	6.40	2.16	50	7.64	3.24
Total	50	9.68	3.44	50	6.98	3.16	Grand Total =100		

**Table 2**  
**Summary of Analysis of Variance ( 2×2) factorial designs**

Source of Variance	Sum of Squares	df	Mean Sum of Squares	F- ratio
Treatment (A)	182.25	1	182.25	17.169**
Attitude (B)	47.61	1	47.61	4.485*
Interaction (A X B)	1.21	1	1.21	.114
Error	1019.04	96	10.615	
Total	1250.11			

\* Significant at 0.05 level

\*\* Significant at 0.01 level

(Critical Value 3.94 at 0.05 and 6.90 at 0.01 level, df 1/96)

### **Analysis of Variance of Achievement Scores**

The mean of different sub-groups, sum of squares, degree of freedom, mean sum of squares and the F - ratio have been presented in Table 2.

### **MAIN EFFECTS**

#### ***Treatment (A)***

It was found from Table 2 that the F-ratio for difference in mean gain scores of mastery learning model and conventional teaching group was 17.169, which in comparison to the table value was found to be significant at the 0.01 level of significance. The groups were different beyond the contribution of chance. Hence, the hypothesis  $H_1O$  i.e. the performance on economics of mastery learning model group will be higher than the conventional group, was accepted at the 0.01 level of significance. The result indicated that the performance of mastery learning model group was higher than that of the conventional teaching group.

#### ***Attitude Groups (B)***

It was found from Table 2 that the F-ratio for difference of mean

of the two groups on attitude level was 4.485, which in comparison to the table value was found to be significant at the 0.05 level of significance. It implied that two attitude groups were different in respect of achievement scores. Hence, the hypothesis  $H_2O$  i.e. the performance of high attitude groups will be higher than the low attitude group, is accepted at the 0.05 level of significance. This is further confirmed as the mean of the high attitude group was higher than that of low attitude group.

#### ***Interaction Effect (A X B)***

It was observed from the Table 2 that the F- ratio for the interaction between treatment and attitude groups were 0.114, which in comparison to the table value was not found to be significant. It indicated that the two variables did not interact with each other. Thus, the null hypothesis  $H_3O$  i.e. the performance through different model of teaching does not interact with attitude level is not rejected. It implies the difference in the achievement scores for high and low attitude groups of students yielded through mastery learning model and conventional teaching model did not differ significantly from each other.

#### **DISCUSSION**

The present study revealed that the mastery learning models of teaching were found more effective than the conventional method of teaching. The results were consistent with the findings of Kulik, Kulik & Bangert-Drowns (1990), Lazaowitz, Baird, Bowlden & Lazaowitz (1996), Laney (1999), Dutt & Kumar (2002), Dillashaw & Okey (2006), Adeyemi, Wambugu & Changeiywo (2008) and Damavandi & Kashani (2010). Mastery learning method caused to increase positive changes in attitude of the weak students to chemistry learning.

The findings for the present study revealed that there was difference

between mean gain scores of the high and low attitude groups. The evidence leads to the conclusions that high and low attitude group was found significantly on economics. The results were in agreement with findings of Banu (1986), Chang & Mao (1999), Kibett & Kathuri (2005) and Adesoji (2008).

### **CONCLUSION**

The present study reveals that achievement score in Economics of students taught through mastery learning was significantly higher than those which were taught through conventional method. Further, the gain means with mastery learning model was more for high attitude group as against the low attitude group and the difference across two method of teaching was statistically significant. However, the difference in mean score for interaction across different grouping did not turn out to be significant. The study recommends the use of mastery learning model for better performance of students.

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