

Effectiveness of Constructive Approach for Learning Achievement in History of IX Class Students

Dr Santosh Sharma

Professor, Faculty of Education, Swami Vivekanand Subharti University, Meerut (India)

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*Corresponding Author

Email: drsantoshsharma421@gmail.com

ABSTRACT

The constructive approach consider the learner as the creator of the own knowledge. Constructivism can be thought as a 'Theory of knowing where we find two focal points: cognitive constructivism and social constructivism. Therefore there is a need to shift from the traditional approach to constructive approach of teaching. The present paper of course is needed in the area of constructive approach to find this effectiveness in the term of the variables related to cognitive and affective domain. History teaching can always be made an interesting experience one. If the context and conditions are supportive, it will create interest in learning this is what the constructive approach tries to provide. Activities should be performed by the students themselves that will create a lot of confidence among them truth would thus be find out in the classroom and this will help in accusation of knowledge. Hence there is a need to try that method which helps in sharpening the cognitive abilities of the students in place of approaches like inquiry method, concept attainment method or we can say the traditional methods. The stress lies on the fact that mere book reading and rote memorization do not lead to meaningful learning. The idea to construct in our cognition and its application is the true learning. The present paper is undertaken with an objective that the findings will help to state the importance of constructive approach in classroom teaching specially History teaching.

1. Introduction

Education in general sense is a form of learning in which the knowledge skills and habits of a person or a group of person are transferred from one generation to the next through teaching training or research. The term education has a very wide connotation. The concept of education is like a diamond which appears to be of a different color when see from a different angle similarly education has different meanings on account of the following factors : (i) cultural setting (ii) economic setup (iii) geographical consideration (iv) political philosophy and system (v) philosophical thought (vi) religious moorings (vii) sociological thinking.

Education in a narrow sense is the modification of behavior of children in a controlled environment to shape behavior. Thus change is dependent on the teaching process. Teaching is an activity which is designed and performed for multiple objectives in terms of changes in pupil behaviors.

Education should aim at developing the innate potentiality and unique individuality of each child according to his nature. Therefore in providing learning experience every attempt is made at all levels of education to match with the capability of the learner and for that suitable curriculum are framed. Learning occurs when a learner is actively involved in learning. Learning outcomes as not depend on teacher's presentations instead they are interactive results of the learners existing cognitive structure with newly encountered knowledge. Learning is the product of self organization recognition of existing ideas the conception of learning has changed from information processing to the construction of knowledge. Constructive approach seems to be very effective in providing meaningful learning. This constructive philosophy is rooted in

John Dewey is philosophy of pragmatism. This construction process never starts at Ground Zero but always has its basis inane according to this approach this kind of learning can take place only when the release formation to his already existing knowledge. According to Bruner, constructivism is the learning in which in active process learner construct new ideas and concept based upon their current and past knowledge. Knowledge cannot be transmitted to the learners' mind from a textbook by the teacher instead their knowledge should be constructed through consignment mean their ideas and new concepts experience they acquire from School surrounding environment or daily life. These types of experiences can result in assimilation in which new knowledge is incorporated into existing cognitive structure and Accommodation where cognitive structure is recognized occurs. Accommodation allows a return to cognitive equilibrium (Bonder 1986); thus from this point of view learning is a process of conceptual change.

John Dewey's philosophy is based on the education that knowledge and ideas from situations which are important needs to be drawn out and of had occurred in social context such as classroom where students join in manipulating and has created a community of learners who built their knowledge together. Daisy emphasized the role of equity learning among the contemporary constructive Piaget and Vygotsky take different epistemological positions Jean Piaget believed that learning is strongly by the learners developmental stage; he laid the foundation for constructivism learning is adaptation to interactions with the environment Lev Vygotsky believed that the meaning are constructed and shared with references in social and cultural context which situate the individual in the classroom learning and involves instructions between learner and teacher and amongst learners.

The theory of construct is generally attributed to Jean Piaget who articulated mechanism by which knowledge is internalized by learners. He suggested that through the process of accommodation and assimilation individuals construct new knowledge from their experiences. Constructivism is basically a theory based on operation and scientific study about how people learn. It says that people construct their own understanding and knowledge about the world through experiencing things and reflecting on those experiences. When we encounter something new we have to reconcile with our previous ideas and experiences maybe regarding some new information as irrelevant. In any case we are active creators of our own knowledge. According to constructing questions should be asked explore and assessed about what we know in the classroom. The constructive view of learning can point towards number of different practices. In the most general sense, it usually means encouraging students to use active techniques, experiments, Real world problem solving to create more knowledge and then to reflect on and talk about what they are doing and how their understanding is changing. The teacher should make sure that she understands the students pre-existing concepts and address them and then build on them. Constructive teacher encourage students to constantly assess how the activity is helping them, gain understanding by questioning themselves and their strategies. Students in the constructive classroom ideally become expert learners. This gives them over broadening tools to keep learning with a well planned classroom environment. The students learn how to learn. Constructivism refers to theories of knowledge learning which state that knowledge is constructed rather than received from objective world or external reality. Knowledge does not exist in book but rather is produced by The Reader in the process of reading. In day today practice however constructivism is much more complicated. Philosophers psychologist sociologist scientist and educator's approach and understand this method of acquiring knowledge quite differently. Thus constructivism perhaps is understood best as an academic construct or metaphor that describes different ways of thinking about learning and knowledge acquisition as summarized In this entry.

Constructivism is a term that should be used with caution and is widely used in many disciplines. Constructivism in education is used in more Limited sense. It is obvious that the term constructivism is used with different meanings. It is used to describe learning and teaching experiences, curricular activities and assessment; it is also used in a more philosophical epistemological meaning. This entry will try to describe some of these different meanings. It will take historical perspective sense, shed light on the development of the use of the term constructivism and some of the Origins for the current somewhat confusing situation and particular emphasis will be given to science and mathematics education mainly because the influence has been largest in these fields.

The emphasis of the constructive theory is on the process rather than product of learning. The constructive theory focuses

that the learner in working memory construct knowledge. In this approach, students determine how much they have learned as well as the process by which they learned. It changes the Dynamics of the traditional classroom by empowering the learners as the focus and architect of the learning process while redefining the role of the instructor to be a guide and helper rather than the source and conduct of knowledge.

2. Objectives of the Study

1. To study the difference between experimental group and control group in the Pre-test.
2. To study the difference between experimental group and control group in the post-test.
3. To study the effectiveness of constructive approach in terms of reaction of the students towards this approach.

3. Hypothesis of the Study

1. There will be no significant difference between experimental group and control group in the pre-test
2. There will be no significant difference between experimental group control group in the post-test
3. There will be no significant difference in the effectiveness of constructive approach in terms of reaction of the students towards this approach.

4. Research Design

The present study is experimental in nature. Pre-test, post-test control group design is employed. The treatment in the study had two levels namely constructive approach and traditional approach.

The group which received the treatment of constructive approach was named as experimental group while the group which received the treatment of traditional method was designated as control group. Traditional method means reading textbook and communicating information through lecture to the students in the classroom, questions are asked to the students and sometimes the teacher dictates the notes here generally the teacher teaches in the class. The experimental group was taught the 21 lessons of history through constructive approach and the control group was taught the same concept through traditional approach.

Population

For collecting data in the present research paper, CBSE Schools of Meerut have been taken as population from which sample has been taken out.

Sample

In present paper systematic sampling is done. The sample of the study is from 8 schools of Meerut which are Affiliated to CBSE out of 132 CBSE Affiliated schools. There were two sections A and B. Section A was treated as Experimental group and section B was treated as Control group.

School wise and GroupWise distribution of the sample

TABLE No: 1

School	Group	Total
The Aaryans	Experimental Group	30
	Control Group	32
Saraswati Vidya Mandir	Experimental Group	30
	Control Group	37
IIMT Public School	Experimental Group	47
	Control Group	44
Satyakaam International School	Experimental Group	45
	Control Group	25
LTR Public School	Experimental Group	36
	Control Group	34
DS Public School	Experimental Group	26
	Control Group	24
Uttam Public School	Experimental Group	27
	Control Group	31
CIS Academy	Experimental Group	29
	Control Group	36

Tools for Data Collection

The variables measured in this study were, Achievement in History and reaction of the students towards Constructive Approach. For measuring achievements in History the students were assessed with the tools developed by the investigator. Reactions of the students of experimental group towards the Constructive Approach were measured with the help of a Reaction Scale developed by the investigator.

In the present study, the variables related to which data is to be collected. Achievement in History and Reaction scale towards Constructive Approach. To select proper tool for research, tool description is the main mechanism of educational research.

Tool Description

Knowledge, Comprehension, Application Analysis.

TABLE: 2

S. No	SECTIONS	No. of Questions	Marks
1.	Multiple Choice Questions	10	10
2.	Short Answer Questions	5	10
3.	Long Answer Questions	1	5
4.	Map Skill	5	10

Statistical Technique Used

The statistical techniques used in the present study for analyzing the data are given objectives as under:

1. For studying the difference between experimental and control group in the pre test t test were used.
2. For studying the difference between experimental and control group in the post test t test were used.
3. For studying the effect of constructive approach in terms of reaction of the students towards approach. Mean, percentile, ANOVA were used.

5. Data Analysis and Interpretation

The experimental design chosen had no control over the pre test differences between control and experimental groups. Thus to control the initial differences, t test percentile and analysis of covariance test was employed. Both the pre test scores level of achievement was taken as covariates. All the data were processed and analyzed using SPSS for windows (Version 20.0)

Hypothesis: 1

There will be no significant difference between experimental group and control group in the pre test.

TABLE :3

Pre Test	Group	Nos.	Mean	S.D	Std. Error Mean	T value
	Experimental	236	14.244	3.6739	.2252	1.945
	control	234	13.592	3.8117	.2492	1.940

Showing results of t-test for equality of Means (Table 3.1)

Pre test	Levene's Test for Equality of Variances	t-test for Equality of Means							
	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal Variances assumed	2.742	.103	.937	65	.352	.9791	1.0446	-1.1071	3.0653
Equal Variances not assumed			.926	58.126	.358	.9791	1.0568	-1.1363	3.0945

The first hypothesis of the study was there is no significant difference between experimental group and control group in the pre test. Table 3 clearly indicate that the mean score of experimental group was 14.244 and in control group were 13.592. The difference of mean is .9791. Standard deviation of pre test of experimental group and control group was 3.676 and 3.8117 respectively.

Table 3.1 reveals the t value was .937 which is not significant at 0.05 level of significance. So, the null hypothesis was accepted and showed that there is no significant difference

between experimental group and control group in the pre test. So, the null hypothesis was accepted.

FINDINGS:- Constructive Approach was found to have no significant difference between experimental and control group in the pre test.

Hypothesis: 2

There will be no significant difference between experimental group and control group in the post test.

TABLE :4

Post test	Group	N	Mean	S.D	Std.Error Mean	T value
	1 Experimental	256	24.27	4.011	.251	14.069
	2 Control	224	19.04	4.117	.275	14.045

Showing results of t-test for equality of Means. (Table 4.1)

Pre test	Levene's Test for Equality of Variances	t-test for Equality of Means							
	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal Variances assumed	.242	.623	14.069	478	.000	5.227	.372	4.497	5.957
Equal Variances not assumed			14.045	466.082	.000	5.227	.372	4.496	5.958

The Second hypothesis of the study was there is no significant difference between experimental group and control group in the post test. Table 4 clearly indicates that the mean score of experimental group was 24.27 and in control group were 19.0. The difference of mean is 5.227. Standard deviation of pre test of experimental group and control group was 4.011 and 4.117 respectively.

Table 4.1 reveals the t value was 14.069 which is significant at 0.05 level of significance. So, the null hypothesis was rejected and showed that there is a significant difference between experimental group and control group in the post test. So, the null hypothesis was rejected.

Findings: - Constructive Approach was found to be very effective and productive in the term of student's achievement in History post test.

TABLE :5

REACTION SCALE	Cases						Result
	Included		Excluded		Total		
	N	Percent	N	Percent	N	Percent	
*Learning through this type of approach is time consuming	238	47.6%	262	52.4%	500	100%	No
*Sometimes it is boring to learn through this material	238	47.6%	262	52.4%	500	100%	No
*Learning through this material is an interesting experience	238	47.6%	262	52.4%	500	100%	Yes

*I feel motivated while learning through the constructive approach	238	47.6%	262	52.4%	500	100%	Yes
* study through this material develops a competitive attitude	238	47.6%	262	52.4%	500	100%	Yes
*I feel active and happy in the class when the teacher taught through constructive approach	238	47.6%	262	52.4%	500	100%	Yes
*material based on constructivism give chance to think independently	238	47.6%	262	52.4%	500	100%	Yes
*I was encouraged to learn when other students attained the concepts in the subject	238	47.6%	262	52.4%	500	100%	Yes
*Studying through this approach motivate the students to explore examples other than those given in the textbook	238	47.6%	262	52.4%	500	100%	Yes
*presentations of the positive examples helped me to acquire concepts	238	47.6%	262	52.4%	500	100%	Yes
*Presentations of the negative examples helped me to acquire concepts	238	47.6%	262	52.4%	500	100%	Yes
*unlabelled examples prompted understanding of the concepts	238	47.6%	262	52.4%	500	100%	Yes
*Examples presented through explained paragraph helped me to acquire the concept	239	47.8%	261	52.2%	500	100%	Yes
*Examples containing the essential attribute of a concept helped me to attain concept	239	47.8%	261	52.2%	500	100%	Yes
*Linkage of different concept in the content was well organized	237	47.4%	263	52.6%	500	100%	Yes

6. Conclusion

Constructive approach is effective in raising the achievement of the subject concerned. It was also experienced during the present study that this approach is not only effective in cognitive development but also effective in interpersonal development. The skills that are practiced by the student can be further mastered by them. As constructive approach advocates for the contextually, therefore, the content should be meaningful to the learner. Learner constructs their own understanding and knowledge of the world. In the most general sense, it usually means encouraging students to use active techniques to create more knowledge and then to reflect on and talk about what they are doing and how their understanding is changing. Steps should be taken to help the students to make sense of learning content.

7. Suggestions

1. The present study was conducted on students achievement in History of IX grade. Therefore, further studies can be conducted with other group of sample and also on different subject.
2. The present investigation was carried out upon students of CBSE affiliated school of Meerut District. In order to give more conclusive result, the study can be carried on school affiliated by UP Board of Meerut or ICSE schools.

3. In the present study systematic sampling was employed. Thus further study may employ the probability sampling or random sampling, scattered sampling.
4. The present investigation can be replicated by taking students of other district.
5. Constructive approach can be applied on trainee teachers, Teachers for Teacher Trainers and their teaching performance can be checked.

8. Educational Implications and Suggestions

Constructive approach is effective in raising the achievement of the subject concerned. It was also experienced during the present study that this approach is not only effective in cognitive development but also effective in inter personal development. The skills those are practiced by students can be further mastered by them as constructive approach advocates for the contextually, therefore the content should be meaningful to the learner. Learner constructs their own understanding and knowledge of the world. In the most general sense, it usually means encouraging students to use active techniques to create more knowledge and then to reflect on and talk about what they are doing and how their understanding is changing. Steps should be taken to help the students to make sense of learning content.

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