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RESEARCH ARTICLE

A STUDY OF THE EFFECTIVENESS OF CONSTRUCTIVIST APPROACH IN TEACHING LEARNING OF HISTORY IN TERMS OF RETENTION

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ABSTRACT

Constructivist paradigm describes the process of learning as meaning-making, in which individuals construct mental models that ground their understanding in a deeply personal and unique fashion. Constructivism places the learner at the centerstage. The constructivist approach is relevant to all subjects of study but more particularly to study of History. Students find it hard to retain the concepts and content of History as their interest level in history is often hard to raise, as they tend to see these topics as outdated and distant from their personal interests and concerns. Hence, a need was felt to study the effectiveness of constructivist approach on the student teachers, who can, in turn, apply it in their classrooms. The effectiveness of Constructivist Approach was studied on Retention of the student teachers. 62 students of Kalka Institute for Research and Advanced Studies constituted the sample of the study. A quasi-experimental design was utilized. Students were randomly divided into experimental group and control group. The experimental group was taught using constructivist approach (Inquiry Guided Learning) while the control group was taught using the conventional approach (talk and chalk). The data was analyzed quantitatively and qualitatively. The analysis of data found a significant difference in the level of retention of control and experimental groups after one month of the completion of the experimental intervention. The experimental group was found to have higher level of retention as compared to the control group.

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INTRODUCTION

Constructivism, reduced to its most basic elements, is simply a learning or meaning-making theory. This theory proposes that people create their own meaning and understanding, combining what they already know and believe to be true with new experiences with which they are confronted (Richardson, 1997). It therefore becomes the task of all teachers to help students construct and reconstruct their personal cognitive map. NCF-2005 has recommended a major paradigm shift from behaviourism to constructivism. It has placed different demands and expectations on teacher, which need to be addressed by both initial and continuing teacher education. The NCF-2005 requires the teacher to be the facilitator of student's learning in a way that the student is helped to construct knowledge for himself/herself. For this, teacher education must engage the theory along with field experiences to help the trainees view knowledge not as external to the learner but as something actively constructed during learning. Teachers need to be trained in organizing activity based, learner centered, participatory learning experiences that help the students learn and retain knowledge more effectively.

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Thus, a TE program is required that would provide adequate scope for viewing a theoretical understanding and its practical aspects in more integrated manner. The teacher therefore must be better equipped for creating a learning environment to suit constructivist approaches and be more responsive to changes in the school system as it envisages this significant paradigm shift. Students' interest, achievement and retention level in history is often hard to raise, as they tend to see these topics as outdated and distant from their personal interests and concerns (Hoagland, 2000). More importantly, teachers of History often wonder why their subject is not impacting students' attitudes towards social engagement and responsible citizenship (Gupta, 1953; Yilmaz, 2009). Therefore an attempt is made here to explore ways by which History teachers can make their subject more practical by creating opportunities for their students to become socially engaged, and in the process begin to build citizens who are willing to take a stand on issues by getting into their genesis and who can appreciate the power of individual voices and the dignity of social engagement and national identity and national pride. This is in keeping with the Objectives given by C.B.S.E for teaching history at the secondary level**.** An equally pertinent concern is the tampering of History textbooks for political vested interests. Providing the students with the original documents and utilizing

Constructivism is an effective way to counter the problem whereby the students are creating their own History. They have the sources to bank upon for their construction of the events that took place in the past. And while they construct the knowledge on their own, achievement and retention are expected to be better.

Objectives

To study the effect of Constructivist Approach on the Retention of the students in History concepts.

Hypothesis

There is no significant difference in the retention of the students of control group and experimental group.

MATERIAL AND METHODS

Population

All the learners enrolled in B.Ed. programmes run by different universities in Delhi and studying Teaching of Social Sciences comprised the population of the present study.

Sample

Sample of the present study was comprised of all the students (62) of B.Ed. of Kalka Institute for Research and Advanced Studies (GGSIPU) who had opted for Teaching of Social Science as one of the method course comprised the sample of the study.

Tools used for the study

1. **CLES: Constructivist Learning Environment Scale:** Constructivist Learning Environment Survey (CLES) (Taylor, Fraser, & White, 1994) was used to measure whether constructivist approaches were presented in the classrooms learning environment. Each form contains 25 items altogether, with five items in each of the five scales. The response alternatives for each item are Almost Always, Often, Sometimes, Seldom, and Almost Never
   Dimensions of the Scale:
   - Personal Relevance
   - Uncertainty
   - Critical voice
   - Shared Control
   - Student Negotiation

- **Achievement Test:** Multiple Choice Test (MCQ) having 98 items was constructed to measure level of Achievement of the students in History. The Achievement Test containing 50 items was administered to both the groups as pre-test and post-test.

2. **Retention Test:** After the gap of a month, the Achievement Test was administered to both the groups to study the level of retention of the students.

3. **Teaching Plans:** Constructivist Teaching plans were prepared using 5 E Learning Cycle Model based on Needham's five phase Constructivism Model. Needham Five Phases Constructivist Model is based on the following Phases:

   a) Orientation
   b) Generation of ideas
   c) Restructuring of ideas
   d) Application of ideas
   e) Reflection

Delimitations

The study was delimited in the following ways:

1. The study was confined to pre service teacher education programmes offered through face to face mode only.
2. Only the Inquiry Guided Strategy has been used for teaching-learning History.

RESULTS AND DISCUSSION

Analysis of the level of retention

The study sought to study the difference between control group and experimenter group on the level of retention.

Objective: To study the effect of Constructivist Approach on the Retention of the students in History concepts.

Hypothesis: There will be no significant difference in the retention of the students of control group and experimental group.

For this, the Achievement test was administered after one month and the scores were calculated and shown in Table 1. Table 1. Shows that the mean scores for Retention is 39.74 for Experimental group and 28.709 for control group. The standard deviation of control group is 3.42 and the standard deviation of experimental group id 2.7. Table 1. depicts the t value that is obtained between the mean scores of control and experimental groups on Retention. The value of observed t being more than the table value of t required at 0.05 levels with df, the difference between the two means is statistically significant at .05 level. Hence, the experimental group was found to have retained concepts better than the control group. Table 2 shows the values of the variance ratio, F which furnishes an overall test of significance of difference among means. The F ratio was found to be significant at 0.05 level. Hence, the null hypothesis was rejected and it was concluded that the difference in the mean scores of Experimental and

Engagement	Object, event or question used to engage students. Connections facilitated between what students know and can do.
Exploration	Objects and phenomena are explored. Hands-on activities, with guidance.
Explanation	Students explain their understanding of concepts and processes. New concepts and skills are introduced as conceptual clarity and cohesion are sought.
Elaboration	Activities allow students to apply concepts in contexts, and build on or extend understanding and skill.
Evaluation	Students assess their knowledge, skills and abilities. Activities permit evaluation of student development and lesson effectiveness.

Table 1. Analysis of mean test scores Related to Retention

Group	N	Mean	Standard Deviation	t-value
Control Group	31	28.709	3.42	14.0966*
Experimental Group	31	39.741	2.7	

*Significant at 0.05 level of significance

Table 2 ANCOVA – Retention scores after partialling out the effect of Achievement post-test scores

ANCOVA[a,b]

				Experimental Method Sum of Squares	Df	Mean Square	F	Sig.
RETENTION Test Score (50 Questions)	Main Effects with Covariates	(Combined)		2125.725	2	1062.863	191.704	.000
		Groups		260.213	1	260.213	46.933	.000
		Covariate	Post Test Score (50 Questions)	239.209	1	239.209	43.145	.000
	Model			2125.725	2	1062.863	191.704	.000
	Residual			327.113	59	5.544		
	Total			2452.839	61	40.210		

a. RETENTION Test Score (50 Questions) by Groups with Post Test Score (50 Questions)
b. Covariates entered with main effects

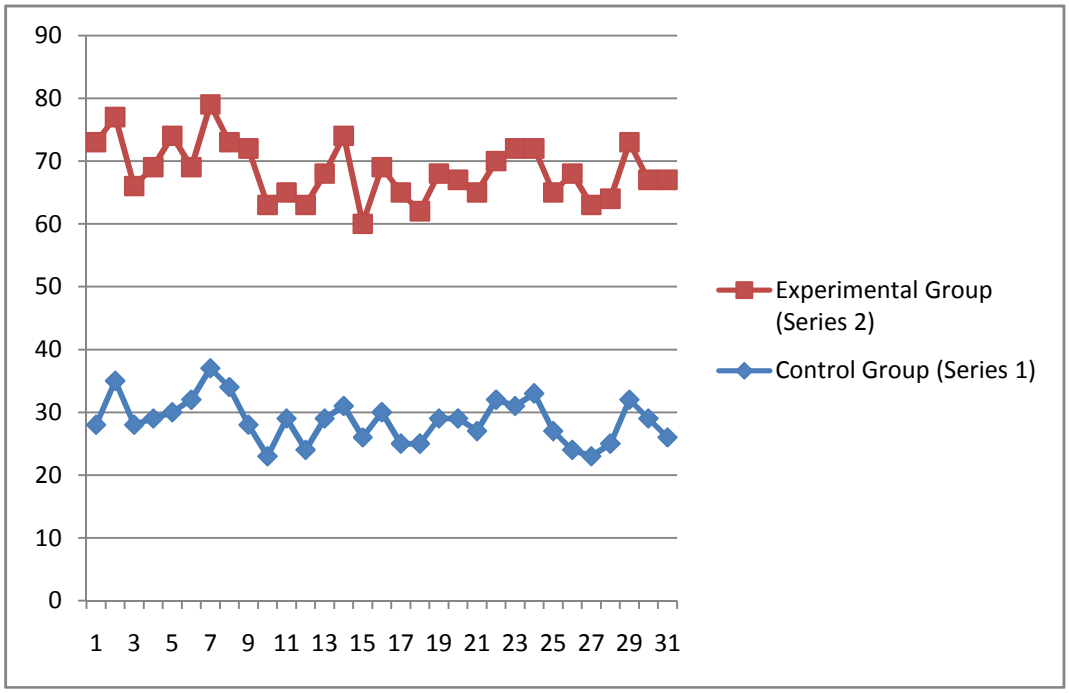

Figure 1. Graphical Representation of the Interest Post test scores of the students taught through Conventional approach and Constructivist approach

Control group was due to the effect of experimental intervention. It was also found that there is significant difference between the mean scores of experimental and control group on the retention scores at 0.05 level, Which shows that the students of experimental group retained the concepts better than the students of control group. Although both the groups scored less than they scored on the post test of achievement. But overall the experimental group showed significantly better retention of concepts than the control group. The findings support the findings of Doğru and Kalender(2007), Hidir Karaduman & Mehmet Gultekin (2007) and Gupta(2000). Experimental group students retained the concepts better because they were involved in the research thoroughly and made presentations after clarifying concepts with the help of original sources, internet resources and group discussions and deliberations. A great deal of reflective thinking was involved in the formation of concepts. So they were able to retain the concepts longer. The post test scores of Retention of experimental and control group are graphically represented in Fig 1.

Implications of the Study

The study has great implications for classroom learning both for the learners and the teachers.

- Constructivist approach should be utilized in the teaching learning of History at the school as well as the pre-service teacher education level.
- For the desired shift required for constructivist teaching in the classrooms, the prospective teachers must be trained to apply constructivist approach to the classrooms.
- It is imperative to initiate the student teachers into the concept as well as the actual application of constructivist approach into the classrooms. For this, a few lesson plans must be made and applied using the constructivist approach during the teaching practice.
- Conferences, workshops and seminars should be held as a part of inservice programmes to train the teachers in constructivist approach.

- History should be compulsorily taught by the constructivist approach in order to counter the flaws such as tampering and saffronisation of the textbooks.
- For the better retention of concepts and for long lasting and meaningful learning, the constructivist approach should be utilized as constructing knowledge would ensure the better understanding and more meaningful knowledge construction thus ensuring learning that is long lasting.
- NCF 2005 recommended the utilization of Constructivist approach in the year 2005 and even after 10 years, the approach is not applied in the actual classrooms. Therefore, there is a dire need to make it mandatory for the teachers to apply constructivist approach in the classrooms.
- Constructivist approach should be used for all other subject areas at all levels of teaching and learning as researches undertaken in this area have established the effectiveness of this approach over the conventional approaches.

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