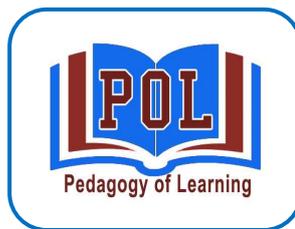


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Constructive Approach and Traditional Approach of Teaching English to Class VI in terms of Achievement: a comparative Study

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Abstract: *The objectives of the study were to find the effectiveness of the constructivist approach in terms of the achievement in English. The two independent variables were the treatment and the Learning Style of the individual learner. A sample 80 students were taken for the study from Bhopal city, Madhya Pradesh. Post-test control group design was employed for the study. The findings of the study were constructivist approach is effective in terms of the students' achievement in English, gender did not produce significant differential effect on the students' achievement in English, there was no significant interactional effect of Treatment and Gender students' achievement in English, there was no significant effect of Style of Learning on students' achievement in English, there was no significant interactional effect of Treatment and Style of Learning on the achievement in English*

Keywords: *Constructivism, Traditional Approach, English, Academic Achievement*

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Introduction

Constructivism may be considered as an epistemology (a philosophical framework or theory of learning (Piaget, 1967), which argues humans construct meaning from current knowledge structures. Constructivism is a philosophy of learning founded on the premise that, by reflecting on experiences we construct our own understanding of the world we live in. Each of us generates our own 'rules' and 'mental models' which we use to make sense of our

experiences. Learning, therefore, is simply the process of adjusting our mental models to accommodate new experiences. The term refers to the idea that individuals, through their interaction with the environment, construct their own knowledge and meaning (Fosnot, 1996). Construction indicates that each learner individually and socially constructs meaning as he/she learns. Constructing meaning is learning. The constructivist perspective provides strategies for promoting learning by all. This metaphor of construction comes from that idea that humans are builders, shapers, and designers, who throughout history have created artifacts from the pots to skyscrapers. The emphasis of the constructivist theory is on the *PROCESS* rather than the *PRODUCT* of learning. Constructivists' theory focuses that the learner in working memory constructs knowledge. In this approach, the students determine how much they have learned as well as the process by which they learned. It changes the dynamics of the traditional class room by empowering the learner 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 conduit of knowledge.

Rationale of the Study

The Executive Committee of NCERT had taken the decision, at its meeting held on 14 and 19 July 2004, to revise the National Curriculum Framework, following the statement made by the Hon'ble Minister of Human Resource Development in the Lok Sabha that the Council should take up such a revision. Subsequently, the Education Secretary, Ministry of HRD communicated to the Director of NCERT the need to review the National Curriculum Framework for School Education (NCFSE – 2000) in the light of the report, 'Learning without Burden' (1993). In the context of these decisions, a National Steering Committee, chaired by Prof. Yash Pal, and 21 National Focus Groups were set up. Finally, NCF came in the form of a document in 2005.

Our teachers are following/practicing the behavioural approach in teaching. They consider learners as the passive receiver the information. The classroom is managed in an authoritarian manner. Teachers dominate the class. Students are compelled/forced to draw conclusions as per the directives of the teacher. They are not empowered to take their own decisions. Therefore, learning becomes a either burden for the learners or of no use in their day-to-life. Education is liberation. Providing direction not the decision should be the function of education. Learners have to construct their own knowledge as per their previous experiences and the cultures in which they live in. Constructivist approach considers the learners as “the creator of their own knowledge”. Therefore, the Italian philosopher Giambattita Vico precisely and elegantly said “God knows the world because he created it; human beings can only know what they have made themselves”. Constructivism can be thought of as a “theory of knowing” (Fosnot, 1996) because it examines the way in which we know and learn. As we examine factors related to the construction of knowledge, we find two focal points: that of cognitive constructivism and that of social constructivism. Cognitive constructivists focus on the cognitive processes associated with constructing knowledge as individuals make sense of new information with which they are confronted. Social constructivists concern themselves with the social and cultural processes at work (Windschitl, 2002). Learners are active creators of their own knowledge by asking questions, exploring subject, and constantly assessing what

and how they know. Each new knowledge must be reconciled with prior understanding; else false models (previous knowledge/paradigms) continue to prevail. Teachings through pupil-generated experiments, real-world problem solving, discussion, debate have to be used in this approach. There is a need to shift from the behavioural approach to constructivist approach of teaching. Critical Pedagogy and the constructivist approach go hand in hand. Therefore, a study was needed in the area of teaching English language through an approach (Constructive) and to find its effectiveness in terms of the variables in terms of Achievement.

Objectives of the Study

1. To study the effect of Treatment and Gender and their interaction on Achievement in English by taking the students' previous years' English Achievement score as covariate.
2. To study the effect of Treatment and Style of Learning on Achievement in English by taking the students' previous years' English Achievement score as covariate.

Hypotheses of the Study

- H₀₁ There is no significant effect of Treatment on adjusted mean score of Achievement in English of students taught through Constructive Approach and Traditional Approach when previous years' English score is taken as covariate.
- H₀₂ There is no significant effect of Gender on adjusted mean score of Achievement in English of students taught through Constructive Approach and Traditional Approach when previous years' English score is taken as covariate.
- H₀₃ There is no significant interaction of Treatment and Gender on adjusted mean score of Achievement in English of students taught through Constructive Approach and Traditional Approach when previous years' English score is taken as covariate.
- H₀₄ There is no significant effect of Treatment on adjusted mean score of Achievement in English of students taught through Constructive Approach and Traditional Approach when previous years' English score is taken as covariate.
- H₀₅ There is no significant effect of Styles of Learning on adjusted mean score of Achievement in English of students taught through Constructive Approach and Traditional Approach when previous years' English score is taken as covariate.
- H₀₆ There is no significant interaction of Treatment and Styles of Learning on adjusted mean score of Achievement in English of students taught through Constructive Approach and Traditional Approach when previous years' English score is taken as covariate.

Methodology of the Study

Experimental method was employed for the study.

Sample

Random sampling technique was used for the selection of the school for the study. The sample was selected from the Bhopal city, Madhya Pradesh. One school was selected, randomly. The experiment was conducted in the session 2012-13. The school was selected,

randomly. Two sections, 'A' and 'B' section of class VI were selected. The Section 'A' was taught through the Constructivist Approach and section 'B' was taught through the Traditional approach. Section 'A' was designated as Experimental group and the section 'B' was designated as Control group.

Table – 1: Group-wise and Gender-wise Distribution of Sample

Group	Boys	Girls	Total
Experimental Group	28	14	41
Control Group	20	8	38
Total	48	32	80

Design of the Study

Post-test Control Group design was employed for the study. The design can be diagrammatically represented as follows:

X O
X O

Tools

Mainly, two tools, such as, Achievement test in English and Styles of Learning were used for the study. The Achievement test in English was developed by the investigator, taking into consideration the contents taught. Styles of Learning was measured by administering the Index of Learning Style Questionnaire of Solmon and Felder (1991). The descriptions of these tools are as follows.

Achievement test in English

There were four (04) questions. Each question had many items. But, all the items are of objective type. The maximum marks for the test was 20. Time allowed was 40 minutes. Descriptions of the test are as follows.

Table – 2: Description of the Achievement Test in English

Sl.No.	Names of the Section	No. of Questions	Marks
1.	Meaning of the words	01	05
2.	Writing sentences	01	06
3.	Writing the characteristics	01	05
4.	True/False	01	04
Total		04	20

Procedure of Data Collection

Data were collected with the help of tools described in the preceding caption. The treatment i.e., teaching through Constructivist Approach and the teaching through Traditional approach was given to the respective groups. The experimental group (Section-'A') was taught through the Constructivist Approach and the control group (Section-'B') was taught through the Traditional approach. In total, fifteen lessons were taught to both the groups following the

different approach, as mentioned. But, both the groups were taught the same content following their respective approach. An Achievement test was developed by the investigator and was administered to the students of both the groups after teaching of fifteen lessons. Styles of Learning questionnaire was administered to both groups during the treatment. The English Achievement score of Class V was collected from the school register.

Statistical Techniques Used for the Analysis of Data

2 X 2 Factorial Design ANCOVA of Unequal Cell size was used for the analysis of data.

Analysis, Interpretations, Discussions and Findings

Objective-wise a analysis, interpretations, discussions and findings are presented, below under different headings.

A. Effect and Interaction of Treatment and Gender on Achievement in English

The first objective of the investigation was to study the Effect and Interaction of Treatment and Gender on Achievement in English by taking the class V English achievement scores as covariate. The class V English achievement scores were collected from the school register. The data were analysed with the help of the 2 X 2 Factorial Design ANCOVA of Unequal Cell size. The results are presented in table -1 and interpretations are given, below

Table - 1: F-values for Effect and Interaction of Treatment and Gender on Achievement in Geography

Sources of Variance	Df	SS	MSS	F-Value
Treatment	1	442.58	442.58	214**
Gender	1	0.075	0.075	0.04
Treat X Gender	1	5.14	5.14	2.49
Error	75	155.10	2.07	
Total	78	602.895		

* Significant at 0.01 level

Table - 2: Mean and SD of Boys and Girls of Experimental and Control Groups for Achievement in English

Treatment	Constructivist Approach			Traditional Approach		
	N	Mean	SD	N	Mean	SD
Boys	28	18	1.67	20	13.70	1.59
Girls	14	18.64	1.51	18	13.22	1.26
Total	42	18.21	1.53	38	13.47	1.44

B. Effect of Treatment on Achievement in English

Table-1 indicates that the F-value for treatment 214. This value is significant at 0.01 level with df equal to 1/78. It indicates that the treatment produced a significant differential effect on the achievement in English. In other words, it can be said that there was a significant effect of treatment on the students' achievement in English. Therefore, the null hypothesis, namely, "there is no significant effect of Treatment on adjusted mean score of Achievement

in English of students taught through Constructive Approach and Traditional Approach when previous years' English score is taken as covariate is rejected. Further, Table – 2 shows that the mean score of achievement in English of the students taught through the constructivist approach (18.21) is higher than the students taught through the traditional method of teaching (13.47). It can, therefore, be said that the constructivist approach was found to be effective in terms of the students' achievement in English than the traditional method.

Finding: Constructivist approach is effective in terms of the students' achievement in English. One of the components of the Constructivist approach was Concept Attainment Model (CAM). Therefore, CAM has some positiveThis finding is supported by a large number of earlier studies (Seggei, 1969; Klausimer, 1970; Chelbek, 1970; Moore, 1973; Singleton, 1977; Zammarelli, 1977; Bergmann, 1980; Contessa, 1980; Miller, 1980; Rollens, 1980; Simon, 1980; Cook, 1981; Musa, 1981; Rowe, 1981; Change, 1982; Hunnicut, 1982; Charles, 1982; Chitrive, 1982; Gerston, 1982; Stout, 1983; Crisman, 1984; Baddar, 1983; Kumara, 1985; Pani, 1985; Shepherd, 1985; Vermont, 1985; Agrawal, 1985; Gangrade, 1986; Geibrasert, 1986; Gibson, 1986; Keller, 1986; Lynch, 1986; Vaidya, 1986; Manocha, 1990, Ojha, 2004). In the above mentioned studies, CAM and some other strategies were studied.

In this study, the reason for Constructive Approach's superiority to Traditional Method might be due to the teacher's domination in the traditional mode of teaching. . CAM was also a component of the study, also. The objective of CAM is to help the students to acquire a new concept (Joyce and Weil, 1985). This strategy aims at concept formation. It involves the stages, namely, identifying and enumerating the data that are relevant to the problem; grouping those data according to some basis of similarity; and then finally categorising and labeling of data is done. Providing practice in inductive reasoning is one of the instructional effects of CAM. In this approach, students get an opportunity to identify common properties of the examples presented and to differentiate them to finally determine the hierarchical order of information. Probably, these above stated ingredients of CAM and the ingredients of other components, such as, role playing, dialogue, etc. were responsible for the improvement of achievement of students taught through the approach. In Constructive Approach, students get opportunity to think openly and freely. The students may think of one attribute or number of attributes of a concept, or the students may think of a concept or a number of concepts, at a time. But, teacher is required to confirm their hypotheses. The nature of the Constructive Approach demands greater involvement of pupils in the teaching learning. Because of these factors inherent in the Constructive Approach, the students might have been enabled to retain and reproduce larger amount of information than those who studied through the Traditional Method of teaching.

Students do not study and acquire knowledge just for the sake of knowledge but, they acquire the knowledge so that they can apply it in their day to day life. Students get an opportunity to identify additional examples. They generate examples and teacher confirms their hypotheses. Students apply those principles, which they have learned. Thus, the strategy provides a chance to draw generalizations by applying principles. It is possible that the different components of the approach might have developed in the students, the ability to apply

principles. This might be the reason for the improvement of Achievement of the students in English taught through Constructive Approach.

C. Effect Gender on Achievement in English

Table - 1 reveals that the F-value for the Gender is 0.075 is not significant at 0.05 level with df equal to 1/78. It indicates that the Gender did not produce any significant differential effect on the achievement in English. In other words, the adjusted mean score of the achievement in English of the students taught through the Constructive Approach did not differ significantly from that of their counterparts taught through the Traditional Method of teaching. Therefore, the null hypothesis, namely, “there is no significant effect of Gender on adjusted mean score of Achievement in English of students taught through Constructive Approach and Traditional Approach when previous years’ English score is taken as covariate”, is not rejected. It signifies that the achievement in English is independent of the gender of the students. Further, it can be evident from the Table – 2 that the mean of the boys and girls taught through the constructivist approach is 18 and 18.64. It signifies that there was minimal difference in the achievement in English between the boys and the girls. Similarly, in the traditional approach of teaching also, the mean score of achievement of boys and girls were 13.70 and 13.22, respectively. There was no such significant difference in their achievement in English.

Finding: Gender did not produce significant differential effect on the students’ achievement in English Mevareach (1985), Chaudhari and Vaidya (1992) and Singh (1994) support this finding. In contrast, Abraham (1969, Beedwati (1986), Mathewe (1976) and Riley (1985) found, in their studies, that males were significantly superior to females in academic Achievement in general. These studies were conducted ten years ago. There is a lot of difference in the attitude of parents, now. At present, through all media, attempts are being made to promote a feeling of equality among boys and girls. There has been a noticeable change in the attitude of parent towards girls and boys. Parents are now almost equally and increasingly investing time, energy and money to both the girls and boys. This change in educational climate and particularly, in the attitudes of parents and teachers might be the cause of lack of Sex difference in the achievement in the present study.

D. Interaction of Treatment, Gender on Achievement in English

Table – 1 reveals that the F-value of 2.49 for the interaction of Treatment and Gender is not significant at 0.05 level with df equal to 1/78. It indicates that the interaction of Treatment and Gender did not produce a significant differential effect on the Achievement in English. In other words, it can be said that there was no interactional effect of Treatment and Gender on the students’ Achievement in English. Therefore, the null hypothesis, namely, there is no significant interaction of Treatment and Gender on adjusted mean score of Achievement in English of students taught through Constructive Approach and Traditional Approach when previous years’ English score is taken as covariate”, is not rejected.

The effect of interaction between Treatment and Gender on the measure of achievement in English was not found significant. The result indicates that the boys and girls were benefited to the same extent in both the modes of teaching. Thus, Gender differential was not noticed in the said interaction on Achievement. But, the mean achievement scores of boys and girls of

experimental group were higher than that of the boys and girls of control group. Further, achievement of girls of experimental group was found higher than their boys' counterparts of the same group. Similarly, boys in the control group achieved higher than the girls of the same group. It may, therefore, be said that gender of the pupils did not affected their achievement in English in both experimental and control group to the same degree.

Finding: There was no significant interactional effect of Treatment and Gender students' achievement in English.

E. Effect of Treatment, Style of Learning and their Interaction on Achievement in English

The second objective of the investigation was to study the Effect and Interaction of Treatment and Style of Learning on Achievement in English by taking the class V English achievement scores as covariate. The class V English achievement scores were collected from the school register. Index of Learning Style Questionnaire of Solmon and Felder (1991) was administered to both the groups for measuring the style of learning of individual students. It was administered in the process of the experimentation. There were four learning styles as developed by the developers of the Index of Learning Style Questionnaire. These are as follows:

1. Active and reflective learner
2. Sensing and intuitive learners
3. Visual and verbal learners
4. Sequential and global learners

But, for the present investigation, only first and the fourth, i.e., active and reflective learner and sequential and global learners were taken for the analysis purposes. There were 09 students in the experimental group having the learning style of Active/Reflective and 10 students having Sequential/Global style. In control group, there were 15 students having Active/Reflective and 3 students of Sequential/Global style. The data were analysed with the help of the 2 X 2 Factorial Design ANCOVA of Unequal Cell size. The results are presented in table -3 and interpretations are given, below. As the effect of the treatment on achievement has already been presented in earlier section, therefore, only the effect of Style of learning and their interaction on achievement in English are presented, below.

Table – 3: F-values for Effect ant Interaction of Treatment and Style of Learning on Achievement in English

Sources of Variance	Df	SS	MSS	F-Value
Treatment	1	12.381	12.381	2.33
Style of Learning	1	30.956	30.956	5.82
Treat X Style of Learning	1	3.855	3.855	0.73
Error	32	0.139	2.07	
Total	35			

Table - 4: Mean and SD of Boys and Girls of Experimental and Control Groups for Achievement in English

Treatment	Constructivist Approach			Traditional Approach		
	N	Mean	SD	N	Mean	SD
Style of Learning						
Active/Reflective	09	18	1.87	15	16.33	2.74
Sequential/Global	10	17.50	2.32	03	16.75	0.58
Total	19	17.74	2.08	18	16.22	2.51

Effect of Style of Learning on Achievement in English

Table – 3 indicates that the F-value of 5.82 for Style of Learning on achievement in English is not significant at 0.05 level with df equal to 1/35. It signifies that the style of learning had no effect on achievement in English when taught through the different approaches of teaching. In other words, it can be said that achievement in English is independent of the Style of Learning. Therefore, the null hypothesis, namely, “there is no significant effect of Styles of Learning on adjusted mean score of achievement in English of students taught through Constructive Approach and Traditional Approach when previous year’s English score is taken as covariate”, is not rejected.

Further, Table – 4 indicates that the mean score of achievement in English of students taught through the Constructivist Approach having Active/Reflective Style of Learning is 18 and mean score of achievement in English of the students having Sequential/Global Style of Learning is 17.50. So, there is no significant difference in achievement in English of students both these Style of Learning. Similarly, the students taught through the Traditional Approach, also, there is no significant difference in achievement in English of the students having different Style of Learning. Although, there is a difference in achievement in English of the students taught through the different approaches, but it was not significant, irrespective of the students’ Style of Learning.

It could be inferred that the Learning Style of the students did not influence the achievement in English. This finding is supported by Mitchell (1992) and Kaya (1991) who found no significant difference in the students’ performance while considering the individual Learning Style. The present finding of the study was not supported by Moore (1991) who found that students who preferred visual learning style had a significantly higher post-test mean score as compared to other. In the normal class room, all students are treated equally with respect to the content, speed of delivery, Method of Teaching, examples, etc. The students may not have opportunity to learn as per their own Learning Style. On the other hand, students may be required to change their Learning Style as per the Method of Teaching used by the teacher and the examination system (Gopal, 2012). There is hardly any scope for the individual learning. The students always learn in the group, both in the school as well as outside the school as most of the students go for private tuition. Thus, the learning Style of the students might not have been influenced the achievement in English.

Finding: There was no significant effect of Style of Learning on students’ achievement in English.

Interaction of Treatment, Style of Learning on Achievement in English

Table – 3 indicates that the F-value for interaction of Treatment and Style of Learning on achievement in English is 0.73 with df equal to 1/35 is not significant at 0.05 level. It signifies that there was no significant interactional effect of Treatment and Style of Learning on students' achievement in English. Therefore the null hypothesis, namely, "There is no significant interaction of Treatment and Styles of Learning on adjusted mean score of Achievement in English of students taught through Constructive Approach and Traditional Approach when previous years' English score is taken as covariate", is not rejected. It can be concluded that the learners of both the groups, i.e., experimental and control group, having different Styles of Learning (Active/Reflective and Sequential/Global) were benefitted in the same way.

Finding: There was no significant interaction of treatment and Style of learning on the achievement in English

Implications

The implications of this study are for direct class room teaching as well as for the teacher education programme. Some of the major implications visualized are as follows.

- i. The strategies used, in this study, may be used by the class room teacher in teaching different subjects other than English.
- ii. The components used in this study may be used, separately or combined, for teaching languages other than English.
- iii. The lessons developed, in this study, may be used by the teacher of English.
- iv. Teacher should be trained to develop instructional material on the lines of the lesson plans presented in this study.
- v. Teachers should be trained to teach through the constructivist approach. These lesson plans may be used as models for imparting training to the teachers as well as to the teacher-educators.

Conclusion

Constructivist approach is effective in improving the achievement in the subject concerned. It was also experienced during the study that this approach was not only effective in cognitive development but also effective in interpersonal development. The skills that were practiced by the learners can be, further, mastered by them. As constructivist approach advocates for the contextuality, therefore, the contents should be meaningful to the learner.

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