EFFECTIVENESS OF CONSTRUCTIVIST APPROACH FOR TEACHING ENGLISH TO CLASS VI IN TERMS OF ACHIEVEMENT

A

DISSERTATION

Submitted to

BARKATULLAH UNIVERSITY, BHOPAL

In partial fulfillment of the requirement

For the degree of

MASTER OF EDUCATION (RIE)

2011-2012

Supervisor
Dr. N. C.Ojha
Assistant Professor

Investigator
Ms. Chandrakanta G. Adlak
M.Ed. (RIE), Bhopal

REGIONAL INSTITUTE OF EDUCAION
(A Constituent Unit of National Council of Educational Research and Training)
Shyamla Hills, Bhopal (M.P)

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DECLARATION

I do hereby declare that the dissertation entitled ***"Effectiveness of Constructivist Approach for Teaching English to Class VI in terms of Achievement"*** *has been carried out by me during the academic year 2011-2012 in partial fulfillment of the requirement for the degree of Maters of Education of Barkatullah University , Bhopal.*

This study has been conducted under the guidance and supervision of Dr. N. C. Ojha, Assistant Professor in Regional Institute of Education.

I also declare that the research work done by me is original and natural. This dissertation has not been submitted before or diploma in any University.

Place: Bhopal
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CERTIFICATE

This is to certify that ***MS. Chandrakanta G. Adlak*** *has worked on dissertation entitled* ***"Effectiveness of Constructivist Approach for Teaching English to Class VI in terms of Achievement"*** *under my supervision for the session 2011-2012.*

It is her genuine work and I consider it worthy of submission for the award of the degree.

Date:
Place

(Dr. N. C. Ojha)

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Place: Regional Institute of Education
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INTRODUCTION

1.0.0 INTRODUCTION

Education is the most important invention of mankind, it begins at birth and end at death. It is a process of growth in which the individual is helped to develop his talents, power, interests and ambitions. This growth is an integrated and harmonious process . Education should aim at developing the innate potentiality and unique individuality of each child according to his nature therefore 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.

Education is a narrow sense is modification of behavior of children in a controlled environment. To shape the behavior or to bring about some change it is necessary to study the teaching process, teaching is an activity which is designed and performed for multiple objectives in terms of changes in pupil behaviors.

Teaching is often thought of as something that comes rather naturally to people who know their subjects. In general, it is

thought that is a simple process that produces simple outcomes. But teaching is an entering important and complex process. It takes place in a complicated serial institution which is filled with diverse people. It is a fluid interplay of events.

Teaching is a dynamic and well- planned process .Its objective is to acquire maximum learning experiences. In order to achieve this great objective, various methods and techniques are used. The success of teaching depends on well-planning. A skilled teacher, while planning, thinks carefully about the teaching strategies. These operations of teaching depend upon contents task analysis, teaching objectives and nature of learning, types of learning, learning experiences, interest of pupils, their attitudes, capacities, needs and entering behaviors. Therefore, it is important to take decision about teaching operations; a teacher should perform in order to achieve the objectives of teaching. For this, it is necessary to select and use appropriate instructional strategy. The word strategy is the determination of some policy by planning before presenting the contents, which helps in achieving the objectives of teaching. Now, educationists are shifting from the positivists approach. The latest approach in teaching is 'CONSTRUCTIVISM'.

1.1.0 WHAT IS CONSTRUCTIVISM?

Constructivism may be considered an epistemology (a philosophical framework or theory of learning) (Jean Piaget), which argues humans construct meaning from current

knowledge structures. Formalization of the theory of Constructivism is, generally, attributed to Jean Piaget, who articulated mechanisms by which knowledge is internalized by learners. He suggested that through process of accommodation and assimilation, individuals construct new knowledge from their experiences. When individuals assimilate, they incorporate the new experience into an already existing framework without changing that framework. This may occur when individuals' experiences are aligned with their internal representations of the world, but may also occur as a failure to change a faulty understanding; for example, they may not notice events, may misunderstand input from others, or may decide that an event is a fluke and is therefore unimportant as information about the world. In contrast, when individuals' experiences contradict their internal representations, they may change their perceptions of the experiences to fit their internal representations. According to theory, accommodation is the process of reframing one's mental representation of the external world to fit new experiences. Accommodation can be understand as the mechanism by which failure leads to learning; when we act on expectations , we often fail, but by accommodating this new experience and reframing our model of the way the world, we learn from the experience of failure, or others failure.

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; Steffe and Gale, 1995). 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 by all. This metaphor of construction comes from that idea that humans are builders, shapers, and designers, who throughout the history have created artifacts from the pots to skyscrapers. The emphasis of 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 learning process while redefining the role of the instructor to be a guide and helper, rather than the source and conduit of knowledge.

This view emerged in the 1980 and 1990s and was based on the study of human learning in increasingly realistic settings. This philosophy has a long history. The major philosophies behind this theory are Dewey, Montessori, Piaget and Vygtosky and

Novak. Driver and Easley's article entitled "Pupils and Paradigm: A review of literature related to concept development in adolescent science students", which was published in the study of science Education, is considered as the beginning of the constructivist movement. Later on Posner (1982), Driver (1989), Novak (1993) and others conducted studies on 'how children construct knowledge' and 'how teacher can provide interventions to help children construct their own concept'. According to the knowledge construction view, the learner is a sense maker, whereas the teacher is cognitive guide who provides guidance and modeling on authentic tasks. The instructional designer's role is to create environments in which the learner interacts meaningfully with academic material, including fastening the learning meaningfully with academic material, including fastening the learning process of selecting, organizing and integrating information.

There is a shift from positivist point of view to Constructivist point of view, the epistemic view of positivist considers that 'objects' can be studied and the knowledge is discovered unaffected by previous ideas or belief . The 'universal; truth' that is discovered is based on logic, objective experience based on inferences and mathematical application. In contrast to this view, the epistemic view of Constructivist considers that knowledge is constructed based on previous knowledge and human experience. There is no final truth 'out there' but the

knowledge is continually tested and refined with further observations and experiences. Thus, students' alternative frameworks, previous experiences and knowledge play an important role to mould students' conception in the classroom.

For meaningful learning to occur in the classroom, it is essential that the understanding of students learning process is gained and applied to curriculum construction. I the absence of this, rote memorization largely takes place in the classroom, which is neither helpful nor lasting (Saxena, 1995). Learning with understanding takes place when the four frames of understanding: content frame, problem solving frame, epistemic frame and inquiry frame (Perkins and Simmon, 1998) are taken care during teaching and evaluation.

Constructivist belives that students do not come to the class with 'Tabularsa'-clean slate and their previous experiences, beliefs and ideas affect interpretations they make of their observations(Driver,1983). Constructivist's intervention includes continual testing, modification, restructuring and improvement of knowledge based on experiences and observations. Its basic assumptions could be listed as:

1. Knowledge acquisition is a Constructive or generative process and each student's knowledge is personal and idiosyncratic (Fisher and Lipson, 1996).

2. Students hold intuitive ideas that are both identifiable stable and have enough commonality to make it worth in planning and instructional strategies (Clough and Diver, 1986).
3. Misconceptions may originate as a result of students interaction/ experiences with the real world and/ or because of his/her misinterpretations of the world of ideas presented to him (Driver and Easley).
4. Development of alternatives frameworks or misconceptions is from the same mechanism that leads to the development of conception. In addition, some modes and sequences of presenting information during teaching may result into development of misconception (Eylon and Linn,1987).
5. Due to their different conceptual ecologies, different students can 'incorporate' the same new experiences/ideas differently in their conceptual structures/ frameworks (Jordan, 1987)
6. The process of concept formation is a continuous process of successive approximation and refinement (Fisher and Lipson,(1986)

1.2.0 BASIC CHARACTERISTICS OF CONSTRUCTIVISM

i. Learning is an active meaning-making process required to solve meaningful problems. It is not a passive receptive process.

ii. Meaningful learning occurs within authentic learning tasks.

iii. New learning depends on the learner's previous knowledge and experience.

iv. Social interaction facilitates learning.

1.3.0 PRINCIPLES OF CONSTRUCTIVISM

1. Learning is a search for meaning. Hence, learning must start with the issue around which students are actively trying to construct meaning.

2. Meaning requires understanding wholes as well as parts. Parts must be understood in the context of wholes. Hence, the learning process focuses on primary concepts, not isolated facts.

3. In order to teach well, the teacher must understand the mental models that students used toperceive the world and the assumptions they make to support those models.

4. The purpose learning for an individual is not just memorise the 'right' answers but to construct his or her own meaning.

1.4.0 WHO IS A CONSTRUCTIVIST?

A constructivist is a practioner who

1. Belives knowledge is constructed or invented by the learner.
2. Involves in active manipulations of meanings, numbers, and patterns.
3. Belives learning is nonlinear.
4. Provides students with the tools of empowerment: concepts, heuristic procedures, self-motivation, and Reflection.

5. Belives learning occurs most effectively through guided discovery, meaningful application, and problem solving.

1.5.0 NEED/JUSTIFICATION/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 Honourable Minister of Human Resource Development in 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 Focus Groups were set up. Finally, NCF came in the form of documents 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 Giambattia 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 process associated with constructing knowledge 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 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. Teaching throughpupil-generated experiments, real-world problem solving, discussion, debate have to be used in this approach.

Critical pedagogy provides an opportunity to reflect critically on issues in terms of their political, social, economic and moral aspects. It entails the acceptance of multiple views on social

issues and a commitment to democratic forms of interaction. This is important in view of the multiple contexts in which our schools function. A critical framework helps children to see social issues from different perspectives and understand how such issues are connected to their lives. For instance, understanding of democracy as a way of life can be chartered through a path where children reflect on how they regard others (eg. Activities, play, friends, career, etc.) and how they cultivate the ability to make decisions. Likewise, issues related to human rights, caste, religion and gender can be critically reflected on by children how different forms of inequalities become compounded and are perpetuated. Critical pedagogy facilitates collective decision teachers making through open discussion and by encouraging and recognizing multiple views.

1.6.0 STATEMENT OF THE PROBLEM

The title of the present study was worded as under:

"EFFECTIVENESS OF CONSTRUCTIVIST APPROACH OF TEACHING ENGLISH TO CLASS VIIN TERMS OF ACHIEVEMENT"

1.7.0 DEFINING THE KEY TERMS

Constructivist Approach:
In this approach following strategies will be used for teaching English to class VI students:

a. Concept attainment model (CAM) of Burner

b. Advance Organiser Model (AOM) of Ausubel

c. Concept Mapping

d. Project Mapping

e. Lecture-cum-Discussion Method

f. Role-playing

g. Dialogue

Traditional Approach:

In this approach only lecture method will be used to teach English to class IX students.

1.7.0 OBJECTIVES OF THE STUDY

The following objectives are framed fpr the proposed study:

1. To study the effectiveness of the Constructivist Approach in terms of Achievement in English of students of class VI.
2. To study the effect of Treatment and Gender and their interaction on Achievement in English by taking the student's previous years English Achievement score as covariate.
3. To study the effect of Treatment and Style of Learning on Achievement in English by taking the student's previous years English Achievement score as covariate.

1.9.0 HYPOTHESIS

2. There is no significant effect of Treatment on adjusted mean score of Achievement in English of students' taught through Constructivist Approach and Traditional Approach when their previous year English score is taken as covariate.
3. There is no significant effect of Gender on adjusted mean score of Achievement in English of students' taught through Constructivist

Approach and Traditional Approach when their previous year English score is taken as covariate.

4. There is no significant interaction of Treatment and Gender on adjusted mean score of Achievement in English of students' taught through Constructivist Approach and Traditional Approach when their previous year English score is taken as covariate.
5. There is no significant effect of Treatment on adjusted mean score of Achievement in English of students' taught through Constructivist Approach and Traditional Approach when their previous year English score is taken as covariate.
6. There is no significant effect of Styles of Learning on adjusted mean score of Achievement in English of students' taught through Constructivist Approach and Traditional Approach when their previous year English score is taken as covariate.
7. There is no significant interaction of Treatment and Styles of Learning on adjusted mean score of Achievement in English of students' taught through Constructivist Approach and Traditional Approach when their previous year English score is taken as covariate.

1.10.0 DELIMITATIONS OF THE STUDY

The present study was conducted under the following constraints:

1. The CBSE syllabus of class VI English was selected.
2. School will be selected from the Nagpur city, Maharashtra.
3. Only, ten-day treatment was given.
4. Only, ten lessons were taught.

CHAPTER-II
REVIEW
OF
RELATED LITERATURE

CHAPTER – II

REVIEW OF RELATED LITERATURE

2.0.0 INTRODUCTION

Research takes advantage of the knowledge which has accumulated din the past as a constant human endeavour. It can be never be undertaken in isolation of the work that has already been done. The problems which directly or indirectly related to the study proposed by the researcher. A careful review of the research journals, books, dissertation thesis and other resourceful information on the problem to be investigated is one of the important steps in planning of any research. Review is important to organize the knowledge of the specific area of research to evolve an edifice of knowledge to show that the proposed study would be an addition to this field.

2.1.0 MEANING AND IMPORTANCE

Human knowledge has three phases: preservation, transmission and advancement . Practically all-human knowledge could be found in books, journals and papers.

Before taking up specific research project in the development of a discipline, the researcher must be thoroughly familiar with previous

theory research. To assure this familiarity, every research project in the behavioural sciencies has to review the available theoretical and research literature.

The phrase"review of literature" consist of two words "review" and"literature". The term review means to organize the knowledge of the specific area of research to evolve an edifice of knowledge to show that the proposed study would be an addition to this field. In research methodology the term literature refers to the knowledge of a particular area of investigation of any discipline, which includes theoretical, practical and its research studies. These are some reasons for review of literature.

1. Indication of directions.
2. Pre-request to plan of study.
3. Avoid duplication.
4. Source of problem of study.
5. Finding gaps.
6. Clear picture of the problem.
7. Determining meaning and relationship among variables

2.2.0 STUDIES RELATED TO INSTRUCTIONAL MATERIAL

Shah (1981) conducted a study to develop and try out programmed material in mathematics for student of class V. The Main Objectives were: i) to develop programmed materials on various units of the mathematics syllabus of class V and ii)to try out the same on children of class V from the selected schools. The Findings Of The Study Were i) Programmed material on the selected units was effective and ii) the reaction of the student and the teacher was favourable

Bhagwat (1992) studied to prepare a package of divergent production type problems in mathematics and to study the effectiveness of the package against level of intelligence and sex difference for standard VII students. The Main Objectives were: i) to prepare different production type problems on the standard VII mathematics syllabus in Maharashtra State, ii) to test the effectiveness of package against the level of intelligence for standard VII students and iii) to test the effectiveness of the package against the sex differences of standard VII students. An incidential sample of 50 students (25 boys and girls) was chosen for piolet study. A similar procedure was followed for the main study sample was divided into two groups of 50 each on the basis of level at intelligence. The tools used to collect data included, a standardized test measuring creativity in Mathematics , Raven's progressive Matrics , a package of divergent production type problem prepared by the researcher.The experiment was conducted using the pre test, post group design.The data were analyzed by using correlated `t' test and analysis of co-variance. The Major Findings were: i) There was a significant increase in the post test scores in the case of both girls and boys ii) Taking into consideration the three levels of intelligence, it was found that there was a significant increase in the post test scores in the case of both boys and girls.

Bhattia & Kusum (1992) studied on the identification and remedy at difficulties in learning fractional with programmed instructional material. The Objectives of the study were: **i)** to develop programmed instructional material on fractional number for student of

class V, **ii)** to use programmed instructional material as a remedial materials. For testing the effectiveness of programmed instructional material in the classroom teaching for students of class V, **iii)** to test the significance difference between the traditional method of teaching and teaching through programmed, instructionalmaterial. The Major Findings Were: **i)** teaching and learning through prpgrammed instruction could definitely help both student and teachers, **ii)** Students receiving the programmed instruction material did better in the post test as compared to the other group **iii)** the programmed instructional material worked effectively as a remedial tool and **iv)** Programmed instructional material did not only helped the students to learn better but also helped the teacher to know how the students learn better.

2.3.0 STUDIES RELATED TO ACHIEVEMENT IN MATHEMATICS

Vyas (1983) conducted Development of symbol picture logic programmed (SPLP) and to study its effect on mathematics achievement – A system approach. The objectives were as under : **i)** to develop a SPLP on the basis of the fundamental of symbolic logic **ii)** to study the effectiveness of the SPLP on the achievement in mMathematics **iii)** To identify the effect of the SPLP in thje context of variables like intelligence and syllogistic reasoning ability **iv)** to find the effectiveness of the SPLP in the context of other variables like parent education, sex and the choices of Mathematics course at the SSC level. SPLP was developed keeping in mind the basis element of logic to be included in set programmed and the basic

connectiveness in symbol picture logic, the equivalent group technique was adopted. The tool used were K.G. Desai's intelligence test, and achievement . The Major Findings Were: **i)** the students of the experimental group who were given a treatment of the SPLP showed better achievement in Mathematics than the control group students. **Ii)** the students with intelligence benefied more by SPLP by better achievement in Mathematics than those who possessed low intelligence. **Iii)** The students possessing high reasoning ability beneficial more by the SPL by the better achievement in Mathematics thanthose who possessed low reasoning ability **iv)** there was no interaction between treatment and intelligence. **v**) There was no interaction between treatment and syllogistic reasoning ability **vi)** There was no interaction effect of intelligence and syllogistic reasoning ability of the students **vii)** there was no interaction among the programmed, intelligence and syllogistic reasoning ability. This showed that the achievement in Mathematics was independent of these three variables **viii)** the students of the experimental group possessing high intelligence and high reasoning did better in achievement in Mathematics.

Weep & Cullian (1983) conducted a study on relationships among students and group characteristics, group interaction and achievement in small groups in Mathematics classroom and found that group's interaction tended to stable overt time, both in average frequency and in individual students relative levels of participation.

Verma (1998) studied the school Mathematics project: towards freedom from fear, The objectives were: i) Acknowledge that the present way of teaching Mathematics particularly in the primary classes leaves something to be desired. Ii) Understand the specific doses of the fear of Mathematics in children. Iii) More towards a curriculumn that removes these causes and improves the learning of Mathematics . The investigator founded that in the alternative scheme that they are proposing , the introduction of operations with fractions are delayed till children are at least a full year older and corresponding that much more nature. They are then more likely to understand that the rules for operations on fractions are consistent with the rules for whole numbers and decimals .we believe this will load to greater understanding, better performance , less frarctions and a consequent reduction in fear of mathematics among children goals. We would all clearly wish to achieve studies related to activity based teaching learning strategy.

Jain (1994) had taken up a study on the effectiveness activity based teaching strategies using O.B. science kit. The objectives of the study were: i) to design activity based strategy using O.B. kit. Ii)to study the effectiveness of activity based classroom strategies using O.B. kit. The sample included 46 boys and 42 girls of grade IV. For various purposes of the study .The tools were used standard progressive matrices and achievement test in EVS constructed by the investigator The Major findings were: The Major findings were: i) The activity based teaching strategies are more effective than the traditional

method ii) Oral responses of the students at the primary stage are better than their responses.

Deshmukh (1997) designed a study to develop alternative strategies and support activities as well as instructional material to facilitate learning of the unit; Vulgar fraction in Mathematics syllabus of standard V. it was found that if the child learns through games, he does not fell the stress of learning, and learning becomes easier and enjoyable.

Rao(1999) conducted a study on the effectiveness of activity packs in teaching environmental studies in improving the achievement levels of students. Objectives: study the effect of teaching through the use of activity-packs in eight unit of class IV MLL competencies in environmental studies II. i) study the effectiveness of activity-packs on the achievement of master of learning in the competencies ii) compare the efficacy of activity packs in experimental approach with the teaching strategies followed by teachers. iii) see the effect of activity packs in attainment levels of students. The major findings were: i) the activity packs used had shown as very effective in achieving target performance ii) the activity packs provided opportunities to the students for self learning which increased learning efficiency among the student. Iii) the activity packs were encouraged independent study habits among the students as they were provided with directions which were helpful for independent study.

Reddy and Ramer (1995) conducted a study to find the effectiveness of Multimedia based modular approach in teaching mathematics to low achievers. The present study is an attempt to develop multimedia modules for mathematics for the use of low achievers studying in standard VIII and to measure their effectiveness and also asses their advantage over the traditional lecture method. Findings revealed that the experiment group performed significantly better than the control group on the post test.

2.4.0 STUDIES RELATED TO CLASSROOM TEACHING/INSTRUCTIONAL PROCESS

Dutta (1990) has discussed diagnosis and prevention of learning disabilities in the reasoning powers of the students in geometry. The researcher found that the disabilities are there because the teaching of geometry is geared to the needs of the most able students, there are no experiment to strengthen the teaching of geometry and the relation of geometry and physical space is not explored. The use of audio visual materials leads to greater interest, clearer understanding and longer relation of geometrical concepts. The teaching of geometry has been a subject of debate and Dutta (1990) has made some contribution to it.

Duren Cherrington 91992) studied the relative effect of Co-operative basis independent practices following the instructional period of introducing mathematical problem solving strategies .The result of the test indicated that the students who worked co-operatively were able to remember and apply the problem solving

strategies better than the students for the independent practices classes. Result also shows that the students were more willingly to take a problem linger in the co –operative groups from teacher observation and notes, students in the co-operative group classes were more open to alternative strategies and received much more corrective feedback from pears.

Bassima (1993) conducted a study to examine the effect of simulation technique in the teaching of mathematics with reference to one area "matrices". This study was conducted on 30 students, aged between 12 and 13 years, who were divided into experimental and control groups. An objective type test was administered in order to collect the relevant data. The data were analyzed using mean, SD and 't' test. In study the simulation technique was found better in learning mathematical topics than the traditional method.

Kumber (1993) conducted a study to investigate the effect on students of ability grouping on geometry learning transfer after a semester of instruction with Logo Environment. The Logo Distinction took place during the first three months of the second semester over all geometry post test revealed a significant difference in the main effect based ability no significant differences in heterogeneous grouping pattern were ground. The lowest mean score was an accomplished by the low ability students who were grouped homogeneously. The mean post test percentage score on the overall geometry test shows high ability students scored higher in the

homogeneous group, while average and low ability students scored higher in the heterogeneous group.

The researches has presented an extensive elaborate review of related studies done in the field of activity based teaching learning strategy, and pertaining to instructional material , Instructional process & achievement in mathematics. The researcher found some groups and deficiencies after although study of the post research studies. An overall view of the review reveals the fact that even though there is a lot of research conducted in the field of activity- based teaching by Jain (1994), Dash (1996), Deshmukh (1997), Pandhi (1998), Rao (1999), Meera (2005) but in which very few studies were conducted to find out the effect of activity based teaching learning strategy in mathematics and no study was done influence of constructivist approach on achievement of class V students in geometry. It is also clear from the review that interventional studies are at a decrease. There is a wide scope for the further research.

2.5.0 STUDIES RELATED TO APPROACHES

Khare (1986) conducted a study entitled "traditional and structural approaches of teaching English with reference to learning outcomes". The objectives of the study were: i) to test the general level of performance of junior high school students in various aspects of English, namely spelling, comprehension , applied grammar and vocabulary ii) to make the comprehensive study of the average performance of the students taught through the structural approach and traditional. Sample of the study comprised of 253 boys and 300

girls from four districts in U.P. seven achievement test for seven different dimensions of English were constructed. The following conclusion drawn: i) the students' achievement under the structural approach was better than those under the traditional method in areas of spelling, pronunciation and applied grammar.

Kudesia (1987) conducted a study entitled "An experimental comparison of discussion method and lecture method in teaching technical English to first year students of polytechnic" (Bhopal). The objective of the study was to compare the effectiveness of two methods of instruction i.e. the lecture method and discussion method in learning technique English. The sample comprised 30 students of Bhopal. An achievement test consisting of 30 questions was prepared on the basis of bloom's Taxonomy. The major finding of the study was that the experimental group achieved significantly better results on achievement test.

Singh and Sarangi (2001) in their study "English language proficiency of students in different English language teaching system" made on attempt to find out how English language system of school education. The teaching methods in traditional system are accordingly text book oriented and focused on reading and writing alone. In contrast innovative system emphasis was on writing as well as speaking English. A language proficiency test comprising the four skills- listening, speaking, reading, and writing was used for the collection of data. In al, The performance of the innovative system was found to be higher in skills like speaking, reading and writing.

Ngarajan (1968) compared bilingual method and other methods in teaching English on class VI of Hindi medium students of Hydrabad. Other variables were kept constant except the use of mother tongue. The major finding of the study was : i) Bilingual method is a simple from the p[oint of view of both learners as well as teacher and it enables to speak fluently and accurately.

Pradhan (2001) compared direct method and Bilingual method of teaching English iin class. The objective of the study was : i) to analyze inadequacies of different methods of teaching that are in vogue. i) to develop four language skills. The findings were : i) the ANOVA revealed that treatment produced significant effect, ii) the Bilingual method ensured accuracy and fluency in spoken word.

Patil (2006) conducted a study entitled "A comparative study of achievement in English Language of class VI students studying through traditional approach and structural approach".

From the above review of related literature, it was found that in many areas of teaching, studies have been conducted. But those were in behavioural approach. A few researches have done on Constructivist Approach. Therefore, 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 is needed in the area of constructive approach to find its effectiveness in terms of the variables related to cognitive and affective domain. In these terms of the variables related to cognitive and affective domain. In

this study, an attempt will be made to investigate the impact of constructivist approach on achievement of class VI students in English.

2.6.0 CONCLUSION OF REVIEW OF RELATED LITERATURE

By studying the above researches it gets clear that though studies have been conducted in the field of constructivist approach especially. Whatever research has been done is not directly related with the present study. Hence, above mentioned researches are the bases for the present study.

CHAPTER-III
METHODOLOGY

CHAPTER-III

METHODOLOGY

3.0.0 INTRODUCTION

Research is a way to systematically solve the research problem. It may be understood as he science of studying how research is done significantly. In it we study the various steps that are generally adopted by the researcher in studying his research problem along with the logic behind them. It is necessary for the research to knownot only the research techniques but also the methodology.Researcher not only need to knowhow to develop certain indices or tests, how to calculate the mean, the mode, the median or the standard deviation or the chi-square, how to apply particular research technique, but they also need to know which of these methods and techniques are relevant and which are not and what would they mean and indicate and why. Researcher, also, need to understand the assumptions underlying various techniques and also need to know the criteria by which they can decide that certain techniques and procedures will be applicable to certain problems and other will not. All this means that it is not necessary for the researcher to design his methodology for his problem as the same may differ from problem o problem.

Why a research study has been undertaken, how the research problem has been defined, in what way and why the hypothesis has been formulated, what data have been collected and what particular method has been adopted, why particular technique of analyzing data has been used and a host of similar other questions are usually answered when we talk of research methodology concerning a research problem or study.

This chapter deals with methodology employed to achieve the objectives of the study mentioned in chapter one. Keeping in view the nature and objectives of the study appropriate sample was selected and tools were developed. This chapter deals with variables, research design, sample, tools used, data collection and statistic used.

3.1.0 RESEARCH DESIGN

The research design is the detailed plan of an investigation. In fact it is the blue print of the detailed procedure of testing the hypothesis and analysing the obtained data. The research design may be defined as a sequence of those steps taken ahead of the time to ensure that the relevant data permits objective analysis of the different hypothesis formulated with respect to the research problem.

Research design refers to the systematic scheduling of the time in which treatment is administered to the students and at which observations are made on the performance of the subject. This careful scheduling of the treatment and observation will be very helpful in reducing the threats to the internal validity of the research.

3.1.1 DESIGN OF THE STUDY

The method followed for the present study was experimental. Post-test control group design was employed for the study. Post-test control group design was employed for the present study.

Table 3.1: Design of the study

Characteristics	Control Group	Experimental Group
Early status	Class V Achievement in English	Class V Achievement in English
Treatment	Traditional approach of teaching	Constructivist approach of teaching
Terminal status	Post-test	Post-test

Table 3.2 : Schematic Representation of the Study

Activity	Experimental group	Control group	Time
Group formation	Experimental group	Control group	
Treatment	Lesson on desert animals was taught through constructivist approach	Lesson on desert animals was taught through traditional approach	40 minutes each= 400 minutes
Post-testing of the variable	Achievement test	Achievement test	35 minutes

3.2.0 SAMPLE

Most of the educational phenomena consist of large no of units. It would be impractical to observe each unit of the population under controlled conditions in order to arrive at principle having universal validity. Some population are so large that their study would be expensive in terms of time, money effect and Man power. Sampling is a process by which a relatively small number of individual objects of events are selected in order to find out something about entire population from which it was selected.

An appropriately chosen sample size enhances the reliability and validity of the research findings. Commonly used sampling techniques are random sampling, stratified sampling and purposive sampling.

For conducting the present study Random sampling technique is uesd for the selection of the school for the study. It included Kendriya Vidyala Vayusena nagar

,Nagpur. There was two sections of the class. One group was designed as Experimental group and another group was designed as control group. The description of the study is given in the table 3.3

Table - 3.3:Group-wise and Gender-wise Distribution of the Sample

GROUP	BOYS	GIRLS	TOTAL
EXPERIMENTAL GROUP	28	14	42
CONTROL GROUP	20	18	38
TOTAL	48	32	80

3.3.0 VARIABLES

A variable is something that varies. It is a property that takes in different values. Variables are the conditions or characteristics that the researcher manipulates, control or observes. There are following types of variables.

Independent Variable

The independent variables are the conditions or the characterization that the researcher manipulates, controls and observes. The independent variable in the present study are the two different approaches of teaching English i.e. Constructivist Approach and traditional Approach. The Experimental group was taught by Constructivist approach and the control group was taught by the traditional approach.

Dependent Variable

The dependent variable is the conditions or characteristics that appear or change as the experimenter removes or change the independent variables. The dependent variable in the present study is Achievement in English.

3.4.0 TOOLS USED

To select or construct appropriate tools for the study is an important aspect of any research study. Sometimes, the researcher uses the tools which are constructed by others which are standardized; sometimes the researcher has to construct the tools to fulfill his or her purpose.

In the present study, the researcher used two tools, one was self constructed and another was standardised tool.

1. Learning Style Questionnaire
2. Achievement in English

3.4.1 Learning Style Questionnaire

For assessing the Learning Style of the students, the Index of Learning Style Questionnaire developed by Soloman and Felder was used. It was administered in the process of experiment to the students of both the groups and scored properly with help of web-scoring. There were four learning styles as described by the developers of the Index of Learning Style Questionnaire (Soloman and Felder). These are as follows.

i. Active and reflective learners
ii. Sensing and intuitive learners
iii. Visual and verbal learners
iv. Sequential and global learners

But, for the present study, only, the first and fourth, that is Active and reflective learners and Sequential and global learners were taken.

3.4.2 Construction of Achievement Test in English

Achievement test in English consisted of following lesson:

Desert animals

In the first draft the researcher constructed the items. These were given to two teachers who were teaching English to class VI in the school. The two teachers suggested certain modification to constructed tool which in turn discussed with the supervisor.

On the basis of suggestion, it was reconstructed by making suggested modification. The time limit was 40 minute. The final format of the achievement test consisted of fill in the blanks, Name the following and short answer type.

Table – 3.4: Description of Achievement Test in English

Sr.No	Name of the section	No. Of Questions	Marks	Time (mins)
1	Write the meaning of the following words.	1	5	10
2	Write one sentence on each of the following	1	6	10
3	Write five characteristics of Desert.	1	5	10
4	Write true or false	1	4	10
	Total	4	20	40

3.5.0 PROCEDURE OF DATA COLLECTION

Data is collected with the help of tools described in the preceding captions. The treatment i.e., teaching through constructivist approach and the teaching through traditional approach is given to both the groups, respectively. The experimental group is taught through the constructivist approach and the control group is taught through the traditional approach. In total, ten lessons were taught to both the groups following the different approach, as mentioned. An Achievement test was developed by the investigator and was administered to the students of both the groups after teaching of ten 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. The reaction scale developed by the investigator was administered only to the experimental group, who was taught through the constructivist approach, after the completion of ten lessons.

3.6.0 STATISTICAL TECHNIQUES USED FOR THE ANALYSIS OF DATA

The statistical techniques used in the study for analysing the data are given objective as under:

1) For studying the effectiveness of constructivist approach in terms of Achievement in English Percentiles, Mean and C.V. and standard deviation was used.
2) For studying the effect of Treatment and Gender and their interaction on Achievement in English 2 X 2 Factorial Design ANCOVA of Unequal Cell Size was used.
3) For studying the effect of Treatment and Styles of Learning and their on Achievement English 2 X 2 Factorial Design, ANCOVA of Unequal cell size was used.

CHAPTER-IV
ANALYSIS OF DATA
&
INTERPRETATION OF RESULTS

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION OF RESULTS

4.0.0 INTRODUCTION

The first chapter of this report dealt with the background of the problem along with the rationale, objectives, hypothesis and delimitations of the present study. The review of related literature are presented in the second chapter. Methodology of the study including the sample, design of experiment, tools and the statistical techniques used for the analysis of the data are presented in the third chapter. The results and interpretations of the data are presented objective-wise under different captions in the present chapter.

Analysis of data means studying the organized material in order to discover inherent facts. The data is studied from as many angles as possible to explore new facts. Analysis requires an alert, flexible and open-minded attempt. It is worthwhile to prepare a plan of analysis before the actual collection of data.

Once the research data has been collected and the analysis has made the researcher can proceed to the stage of interpreting the results. The process of interpretation is essentially one of the starting of what the result shows? What is their meaning and significance? What is the answer to the original problem? Interpretation is not a routine and mechanical process. It requires a careful, logical and critical examination of the results obtained after analysis. Keeping in view the limitations of the sample chosen the tools selected and used in the study, there is always an element of subjectivity

and the researcher generally commits certain errors while interpreting results of his study. So to have a meaningful result, it needs the application of some statistical techniques.

Statistics is a body of mathematical techniques or process for gathering, Analyzing and interpreting numerical data. Since research yields quantitative data, statistics is the basic tool of measurement, evaluation and research. Statistical data describes group of behaviour or group characteristics abstracted from number of individual observations which are combined to make generalization possible. Statistical methods go to the fundamental purpose of description and analysis. Statistics enables the researcher to analyze and interpret the data for drawing conclusions.

Interpretation of data refers to that important part of the research, which is associated with the drawing of inferences from the collected facts after an analytical study because statistical facts by themselves have no utility. It is interpretation that makes it possible to utilize the collected data in various fields of the study.

According to the hypothesis of the study the data collected were analyzed on the basis of the scores of the tools applied. The statistical method serves the fundamental purpose of description and analysis and their proper application involves answering the following questions.

1. What facts need to be gathered to provide the information necessary to answer the hypothesis?
2. How are these data to be gathered, organized and analyzed?
3. What assumptions underlie the statistical methodology to be employed?
4. What conclusions could be validly drawn from the analysis of the data?

4.1.0 EFFECTIVENESS OF *THE CONSTRUCTIVIST* APPROACH IN TERMS OF ACHIEVEMENT IN ENGLISH

The first objective of the study was to study the effectiveness of the Constructivist Approach in terms of Achievement in English of students of class VI. The results of both the achievement in English and the reaction of the students towards the approach were presented separately in the following captions.

An Achievement test was developed by the investigator to measure the Achievement in English of students. The test consisted of 4 items. The total marks of the Achievement test in English were fourty. The test was administered to both the groups i.e., experimental and control group, after the completion of the teaching of ten lessons. The duration of the test was forty minutes. For the purpose of studying the effectiveness of constructivist approach in terms of the achievement in English, the scores of the experimental group was taken, here into consideration. The scores were analysed with the help of the Percentiles, Mean standard deviation and the co-efficient of variation. The results are presented in the table 4.1

Table 4.1 reveals that 5 % of the students secured that more than 9.10 marks. 50% students secured 18% marks. 90% of the student secured 20 marks. 95 % student secured 20% . Generally, this kind of achievement is not found in students taught through the traditional method of teaching. Therefore it can be concluded that the constructivist approach was found to be effective in terms of Achievement in English.

Finding: Constructivist Approach was effective in terms of students' Achievement in English.

Table – 4.1: Percentiles, Mean, Standard Deviation and the Coefficient of Variation for Achievement in English

Mean	**18.21**
Std. Deviation	**1.68**
Percentiles 5	**10**
10	**12**
25	**15**
50	**18**
75	**19.50**
90	**20**
95	**20.00**

4.2.0 EFFECT AND INTERACTION OF TREATMENT AND GENDER ON ACHIEVEMENT IN ENGLISH

The second objective of the investigation was to study the effect of treatment and gender and their interaction on achievement in English by taking the class V English scores as covariate. The class V English scores were collected from the school register. The achievement in English was measured by administering the achievement test developed by the investigator. The test was administered to both the experimental and control group after the end of the teaching of ten lessons through different approaches. 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 4.3 and 4.4 and interpretations are given in captions 4.2, 4.2.2 and 4.2.3

4.2.1 EFFECT OF TREATMENT ON ACHIEVEMENT IN ENGLISH

Table 4.2 indicates that the F-value of 214 for treatment 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'

Table 4.2: F-values for Effect and Interaction of Treatment and Gender on Achievement in English

Sources of Variance	Df	SS	MSS	F-value
Treatment	1	442.58	442.50	214 **
Gender	1	.075	.075	0.04
Treat X Gender	1	5.14	5.14	2.49
Error	75	155.10	2.07	
Total	78			

***Significant at 0.01 level*

Table - 4.3: Mean, and SD of the Boys and Girls of Experimental and Control Groups for Achievement in English

Treatment	Constructivist Approach			Traditional Approach		
Gender	N	Mean	SD	N	Mean	SD
Boys	28	18	1.678	20	13.70	1.59
Girls	14	18.64	1.151	18	13.22	1.26
Total	42	18.21	1.539	38	13.47	1.44

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 Constructivist Approach and Traditional Approach when their previous year English score is taken as covariate" is rejected.

Further, table 4,3 Shows that the mean Achievement score in English of the students taught through constructivist approach(18.21) is higher than the students taught through the traditional method of teaching (13.70). It can therefore be said that the Constructivist Approach was found to be effective in

terms of Students achievement in English than the traditional Approach of teaching.

Finding: Constructivist Approach is effective in terms of students' Achievement in English.

4.2.2 EFFECT OF GENDER ON ACHIEVEMENT IN ENGLISH

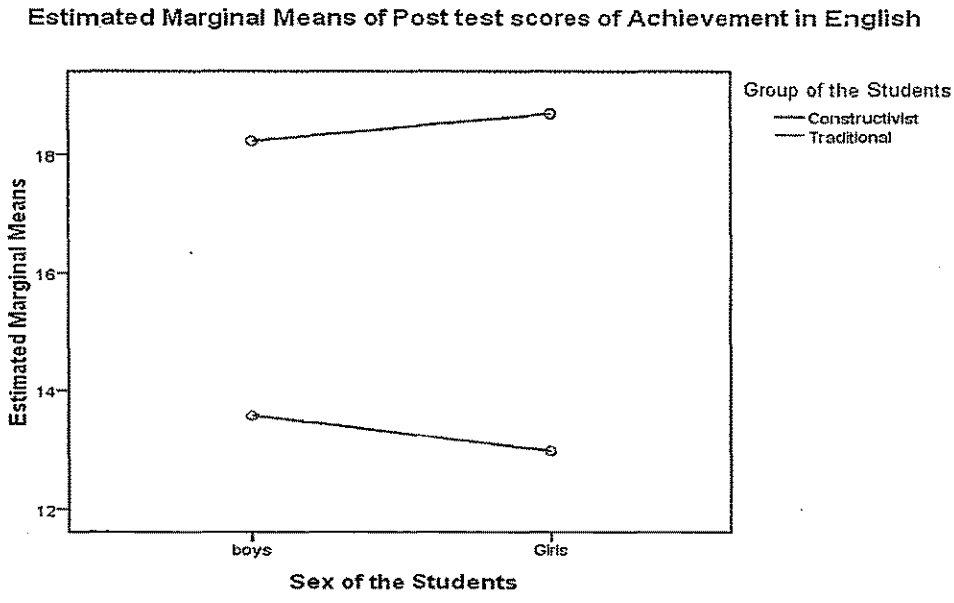
Table 4.2 reveals that the F-value 0.04 for gender is not significant at 0.05 level with df equal to 1/78. It indicates that the gender did not produce any significiant differential significant effect on students' Achievement in English. It shows that the students' Achievement in English is independent of Gender. Therefore, the null hypothesis, namely, "there is no significant effect of Gender on adjusted mean score of Achievement in English of students' taught through Constructivist Approach and Traditional Approach when their previous year English score is taken as covariate", is not rejected. It signifies that the Achievement in English is independent of the Gender.

Finding: Gender did not produce any differential effect on the Achievement in English.

4.2.3 INTERACTION OF TREATMENT AND GENDER ON ACHIEVEMENT IN ENGLISH

Table 4.2 reveals that the F-value of 2.49 for interaction of Treatment and Gender on Achievement in English is not significant at 0.05 level with df equal to 1/78. It shows that there was no interactional effect of Gender and Treatment on 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 Constructivist Approach and Traditional Approach when their previous year English score is taken as covariate", is not rejected.

Finding: There was no significant interaction effect of Treatment and Gender on the students' Achievement in English.



4.3.0 EFFECT AND INTERACTION OF TREATMENT AND STYLE OF LEARNING ON ACHIEVEMENT IN ENGLISH

The third objective of the investigation was to study the effect of treatment and style of learning and their interaction on achievement in English by taking the class V English scores as covariate. The class V English scores were collected from the school register. The achievement in English was measured by administering the achievement test developed by the investigator. The test was administered to both the experimental and control group after the end of the teaching of ten lessons through different approaches. For assessing the Learning Style of the students, the Index of Learning Style Questionnaire developed by Soloman and Felder was used. It was administered in the process of experiment to the students of both the groups and scored properly with help of web-scoring. There were four learning styles as described by the developers of the Index of Learning Style Questionnaire (Soloman and Felder). These are as follows.

v. Active and reflective learners

vi. Sensing and intuitive learners

vii. Visual and verbal learners

viii. Sequential and global learners

But, for the analysis purposes, in the present study, only. The first and fourth, that is Active and reflective learners and Sequential and global learners were taken. 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 4.4 and 4.5 and interpretations are given in captions 4.3.1, 4.3.2 and 4.3.3.

Table 4.4: F-values for Effect and Interaction of Treatment and Gender on

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	.139	2.07	
Total	35	170.119		

Achievement in English

Significant at 0.01 level

Table - 4.5: Mean, and SD of the Boys and Girls of Experimental and Control Groups for Achievement in English

Treatment	Constructivist Approach			Traditional Approach		
Style of Learning	N	Mean	SD	N	Mean	SD
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

4.3.1 EFFECT OF TREATMENT ON ACHIEVEMENT IN ENGLISH

The result and the interpretations are presented in the caption 4.2.1

4.3.2 EFFECT STYLE OF LEARNING ON ACHIEVEMENT IN ENGLISH

Table 4.4 indicates that the F-value of 5.82 for Style of Learning for 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 upon the Achievement of English. Therefore it can be concluded that the 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 Constructivist Approach and Traditional Approach when their previous year English score is taken as covariate", is not rejected.

Further, table 4.5, also, indicates that the mean Achievement in English of students' taught through the Constructivist Approach(17.74) is more than the mean Achievement in English of students' taught through the Traditional Approach(16.22). The mean Achievement in English of students' belonged to the Active/Reflective style of learning taught through the Constructivist Approach(18.00) is more than the students' belonged to the same group of learning style taught through the Traditional approach. But this difference is not significant.

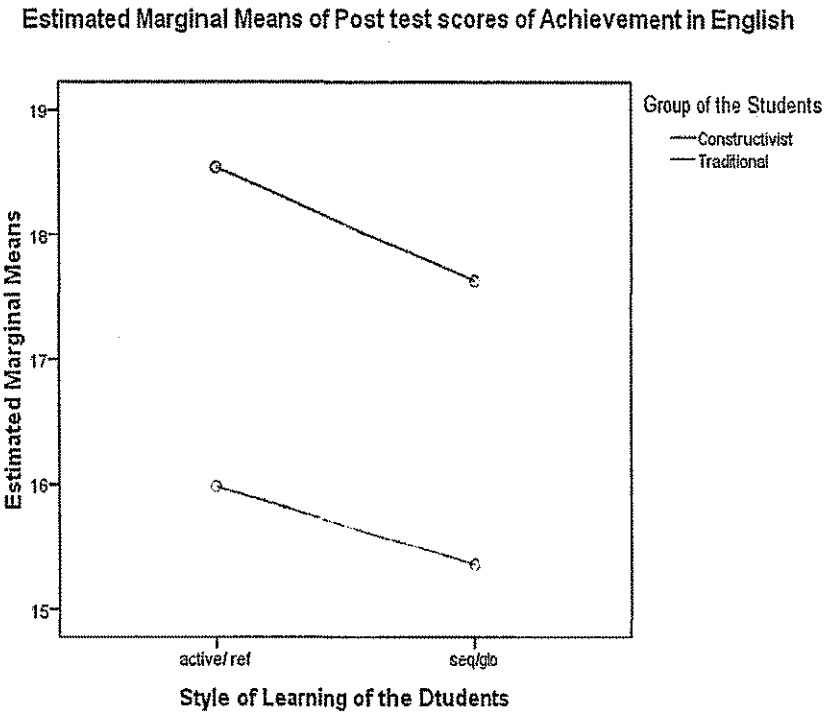
Finding: There was no significant effect of Treatment and Styles of Learning on the students' Achievement in English.

4.3.3 INTERACTION OF TREATMENT AND STYLE OF LEARNING ON ACHIEVEMENT IN ENGLISH

Table 4.4 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 can, therefore, be said that there was no significant

interaction of Treatment and Style of Learning on 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 Constructivist Approach and Traditional Approach when their previous year English score is taken as covariate", is not rejected.

nd Styles of



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5.0.

CHAPTER-V
SUMMARY, SUGGESTIONS & RECOMMENDATIONS

CHAPTER V

SUNNARY AND CONCLUSION

5.0.0 INTRODUCTION

Teaching is a dynamic and well- planned process .Its objective is to acquire maximum learning experiences. In order to achieve this great objective, various methods and techniques are used. A skilled teacher, while planning, thinks about the teaching strategies. These operations of teaching depend upon contents task analysis, teaching objectives and nature of learning, types of learning, learning experiences, interest of pupils, their attitudes, capacities, and entering behaviours. Therefore, it is important to take decision about teaching operations; a teacher should perform in order to achieve the objectives of teaching. For this, it is necessary to select and use appropriate instructional strategy. The word strategy is the determination of policy by planning before presenting the contents, which helps in achieving

the objectives of teaching. Now educationalist are shifting from the positivists approach.The latest approach in teaching is 'CONSTRUCTIVISM' . Our teachers are practicing the behavioural approach in teaching. They consider learners as the passive receiver the information. The classroom is managed in an authoritarian manner. Students are compelled to draw conclusions as per the directives of the teacher. Therefore, learning becomes a either burden for the learners. 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 Giambattia Vico 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 process 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 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. Teaching through pupil-generated experiments, real-world problem solving, discussion, debate were used in this approach.

Critical pedagogy provides an opportunity to reflect critically on issues in terms of their political, social, economic and moral aspects. It entails the acceptance of multiple views on social issues and a commitment to democratic forms of interaction. This is important in view of the multiple contexts in which our schools function. A critical framework helps children to see social issues from different perspectives and understand how such issues are connected to their lives. For instance, understanding of democracy as a way of life can be chartered through a path where children reflect on how they regard others (eg., Activities, play, friends, career, etc.) and how they cultivate the ability to make decisions. Likewise, issues related to human rights, caste, religion and gender can be critically reflected on by children how different forms of inequalities become compounded and are perpetuated. Critical pedagogy facilitates collective decision teachers

making through open discussion and by encouraging and recognizing multiple views.

In this, present chapter, the objective-wise findings and related discussions are presented along with the summary, conclusions and suggestions.

5.1.0 FINDINGS

Findings of the present study are as under:

- Constructivist Approach was effective in terms of students' Achievement in English.
- Gender did not produce any differential effect on the Achievement in English.
- There was no significant effect of Treatment and Styles of Learning on the students' Achievement in English.
- There was no interactional effect of Treatment and Styles of Learning on the students' Achievement in English.

5.1.0 EFFECTIVENESS OF THE CONSTRUCTIVIST APPROACH IN TERMS OF ACHIEVEMENT IN ENGLISH

Constructive Approach was found to be effective in terms of students' Achievement in English. In all these teaching strategies, the climate of the classroom was open, co-operative and encouraging with a scope for good deal of students' activity. The approach, thus, provided wide opportunity to students for acquiring concepts, interpreting the data and applies the principles in new and differential situations. All the students were found active in the class. The results of the present investigation are an outcome of this student-centered approach. The nature of the approach demands greater involvement of pupils in the

teaching learning situation. So, the students were motivated and stimulated to retain and improvement in their achievement. The elements of novelty (new and different approach) or 'orienting effect' might have also contributed towards the present result. Different examples, which were presented in the material, might have aroused interest and motivation among the students to study Urdu. Thus, interest and motivation might have contributed towards the present result. Due to the multiple choice objective type test items, pupils achievement might have been higher. Generally, that kind of achievement of the students, is not achieved either through conventional made of teaching, or through the instructional material that are used by the teachers in the class room. Thus, the teaching through this approach was found to be effective in terms of students Achievement in English.

5.2.0 EFFECT AND INTERACTION OF TREATMENT AND GENDER ON ACHIEVEMENT IN ENGLISH

The discussions related to the effect and interaction of Treatment and Gender on Achievement in English are presented in the captions 5.2.1, 5.2.2 and 5.2.3.

5.2.1 EFFECT OF TREATMENT ON ACHIEVEMENT IN ENGLISH

Treatment (Constructive Approach) produced a significant differential effect on the students' Achievement in English. The adjusted mean scores of Achievement of students in English, taught through the Constructive approach were found to be significantly higher than that of their counterparts taught through Traditional Method. This 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 and 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. The objective of Constructive Approach is to help the students to acquire a new concept. 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 categorizing and Labeling of data is done. Providing practice in inductive reasoning is one of the effects of Constructive Approach. 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 or the components of the Constructive Approach 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 unlabeled examples. They generate examples and teacher confirms their hypotheses. In this phase, students apply those principles, which they have learned in the different phases of CAM. Thus, Constructive Approach provides a chance to draw generalizations by applying principles. This 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.

5.2.2 EFFECT OF GENDER ON ACHIEVEMENT IN ENGLISH

Gender did not produce any differential effect on the students' Achievement in English. Therefore, it may be said that there is no significant difference in the performance of boys and girls on the measure of Achievement in English. Mevareach (1985), Chaudhari and Vaidya (1992) and Singh (1994) support this finding.

In contrast, Abraham (1969, Beedwati (1986), Mathew (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.

5.2.3 INTERACTION OF TREATMENT AND GENDER ON ACHIEVEMENT IN ENGLISH

The interaction of Treatment and Gender did not produce any differential effect on the students' Achievement in English. The effect of interaction between Treatment and Sex on the measure of Achievement in English was not found significant. The result indicates that the male and female students were benefited to the same extent in both the modes of teaching. Thus, Sex differential was not noticed in the said interaction on Achievement. But the mean achievement scores of male and female students of experimental group were higher than that of the male and female students of control group. Further, achievement of female students of experimental group was found higher than their male counterparts of the same group. But, female students in the control group achieved lower than the male students of the same group. It may, therefore, be said that Sex of the pupils did not affect their Achievement in English in both

experimental and control group to the same degree. This result shows that the effect of Treatment on Achievement in English is independent of the Sex of the students. Achievement, generally, depends on the cognitive development of the students. It is not dependent on Sex. Perhaps, therefore, no significant interactional effect was found in this study.

5.3.0 EFFECT AND INTERACTION OF TREATMENT AND STYLE OF LEARNING ON ACHIEVEMENT IN ENGLISH

The discussions related to the effect and interaction of Treatment and style of learning on Achievement in English are presented in the captions 5.3.1, 5.3.2 and 5.3.3.

5.3.1 EFFECT OF TREATMENT ON ACHIEVEMENT IN ENGLISH

Discussed under the caption 5.2.1.

5.3.2 EFFECT STYLE OF LEARNING ON ACHIEVEMENT IN ENGLISH

There was no significant effect of Treatment and Styles of Learning on the students' Achievement in English. Both the groups of learners, i.e., Active/Reflective and Sequential/Global, taught through Constructivist Approach and Traditional Approach benefitted in the same way. The style of Learning did not have any effect on the students' Achievement in English. But, it was also observed from the data that the Achievement in English of learners/students belonged to Active/Reflective category of both experimental and control group was more than the learners/students belonged to Sequential/Global category Style of learning.

5.3.3 INTERACTION OF TREATMENT AND STYLE OF LEARNING ON ACHIEVEMENT IN ENGLISH

There was no interactional effect of Treatment and Styles of Learning on the students' Achievement in English. The result showed that Treatment had effect on the students' Achievement in English. The result, also, indicate that the Style of Learning did not have any effect on the students' Achievement in English. Therefore, there might not have any interactional effect of Treatment and Style of Learning on the students' Achievement in English. As discussed under caption 5.3.2 that both the groups of learners, i.e., Active/Reflective and Sequential/Global, taught through Constructivist Approach and Traditional Approach benefitted in the same way. Thus, it may be said that there was no interactional effect of Treatment and Styles of Learning on the students' Achievement in English.

5.4.0 SUMMARY

The summary of the present study is present below, under different captions.

5.4.1 Need/Justification and 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 Honourable Minister of Human Resource Development in 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

Focus Groups were set up. Finally, NCF came in the form of documents 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 Giambattia 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 process associated with constructing knowledge 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 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. Teaching throughpupil-generated experiments, real-world problem solving, discussion, debate have to be used in this approach.

Critical pedagogy provides an opportunity to reflect critically on issues in terms of their political, social, economic and moral aspects. It entails the acceptance of multiple views on social issues and a commitment to democratic forms of interaction. This is important in view of the multiple contexts in which our schools function. A critical framework helps children to see social issues from different perspectives and understand how such issues are connected to their lives. For instance, understanding of democracy as a way of life can be chartered through a path where children reflect on how they regard others (eg. Activities, play, friends, career, etc.) and how they cultivate the ability to make decisions. Likewise, issues related to human rights, caste, religion and gender can be critically reflected on by children how different forms of inequalities become compounded and are perpetuated. Critical pedagogy facilitates collective decision teachers making through open discussion and by encouraging and recognizing multiple views.

5.4.2 STATEMENT OF THE PROBLEM

The title of the present study was worded as under:

"EFFECTIVENESS OF CONSTRUCTIVIST APPROACH OF TEACHING ENGLISH TO CLASS VIIN TERMS OF ACHIEVEMENT"

5.4.3 OBJECTIVES OF THE STUDY

The following objectives are framed fpr the proposed study:

1. To study the effectiveness of the Constructivist Approach in terms of Achievement in English of students of class VI.
2. To study the effect of Treatment and Gender and their interaction on Achievement in English by taking the student's Previous years English Achievement score as covariate.
3. To study the effect of Treatment and Style of Learning on Achievement in English by taking the student's previous years English Achievement score as covariate.

5.4.4 HYPOTHESIS

1. There is no significant effect of treatment on adjusted mean score of Achievement in English of students taught through Constructivist Approach and Traditional Approach when previous years English score is taken as covariate.
2. There is no significant effect of Gender on adjusted mean score of Achievement in English of students taught through Constructivist Approach and Traditional Approach when previous years English score is taken as covariate.
3. There is no significant interaction of Treatment and Gender on adjusted mean score of Achievement in English of students taught through Constructivist Approach and Traditional Approach when previous years English score is taken as covariate.

4. There is no significant effect of Treatment on adjusted mean score of Achievement in English of students taught through Constructivist Approach and Traditional Approach when previous years English score is taken as covariate.
5. There is no significant effect of Styles of Learning on adjusted mean score of Achievement in English of students taught through Constructivist Approach and Traditional Approach when previous years English score is taken as covariate.
6. There is no significant interaction of Treatment and Styles of Learning on adjusted mean score of Achievement in English of students taught through Constructivist Approach and Traditional Approach when previous years English score is taken as covariate.

5.4.5 Methodology

For the present study, experimental method was employed.

5.4.6 Sample

Random sampling technique was used for the selection of the school for the study. Eighty students of class VI of Kendriya Vidyala Vayusena Nagar ,Nagpur were selected for the study.

5.4.7 DESIGN OF THE STUDY

Post-test control group design was employed for the study.

5.4.8 TOOLS Used

The following tools were used for the collection of data. An Achievement test in English was developed by the investigator. Styles of Learning was studied by administering the Index of Learning Style Questionnaire of Soloman and Felder (1991) was used for the study.

5.4.9 Procedure of Data Collection

Data was collected with the help of tools described in the preceding captions. The treatment i.e., teaching through constructivist approach and the teaching through traditional approach was given to both the groups, respectively. The experimental group is taught through the Constructivist approach and the control group is taught through the traditional approach. In total, ten lessons were taught to both the groups following the different approach, as mentioned. An Achievement test was developed by the investigator and was administered to the students of both the groups after teaching of ten lessons. Index of Learning Styles questionnaire was administered to both groups during the treatment. The English achievement score of class V was collected from the school register. The reaction scale developed by the investigator was administered only to the experimental group, who was taught through the constructivist approach, after the completion of ten lessons.

5.4.10 Statistical Techniques Used For The Analysis Of Data

The statistical techniques used in the study for analysing the data are given objective as under:-

1) For studying the effectiveness of constructivist approach in terms of Achievement in English, Percentile Mean, C.V. and standard deviation is used.
2) For studying the effect of treatment and gender on achievement 2x2 factorial design Ancova of unequal call size is used.
3) For studying the effect of treatment and styles of Learning on Achievement 2x4 factorial design, ANCOVA of equal cell size is used.

5.4.11 Findings

Findings of the present study are as under:

- Constructivist Approach was effective in terms of students' Achievement in English.
- Gender did not produce any differential effect on the Achievement in English.
- There was no significant effect of Treatment and Styles of Learning on the students' Achievement in English.
- There was no interactional effect of Treatment and Styles of Learning on the students' Achievement in English.

5.4.12 Educational Implications

The implication of this study is for direct classroom teaching,as wellas, for the teacher education programme. Some of the major implications visualized are as follows:

1. The strategies used , in this study, may be used by the classroom teacher in teaching different subjects other than the English.
2. The component used in this study may be used separately or combined for teaching languages other than English.
3. The lesson plans developed in this study may be used by the teacher of English.
4. Teachers should be trained to develop instructional material on the lines of the lesson plan presented in this study.
5. The lesson plans developed in this study may be used by the teacher of other subjects for developing lesson plans.

5.4.13 Suggestions For The Further Research

The present study being experimental in nature brings into time light several issues- in which further research can be undertaken following are the few suggestions for further study.

1. The study can be undertaken with the large sample for precise result.
2. Different grade levels can be selected .
3. The findings can be validated with other subjects as well.
4. Rural environment can be consolidated with urban one for a wide scope.
5. Constructivist Approach may be developed and validated in poetry also.

5.4.13 CONCLUSION

Constructivist Approach is effective in raising the achievement of the subject concerned. It also experienced during the present study that this approach is not only effective in cognitive development but also effective in interpersonal development. The skills those are practiced by the students can be further mastered by them. As Constructivist Approach advocates for the contextually, therefore, the content should be meaningful to the learner. Steps should be taken to help the students to make sense of learning content.

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APPENDICES

ACHIEVEMENT TEST

Name:.....Time: 35 Min
Class:.....Marks: 20
Roll no:.....

Qu. 1- Write the meaning of the following words. 5M

1) Scorching:.....
2) Dunes: .....
3) Pebbly:.....
4) Voles:.....
5) Amusing:.....

Qu2- Write one sentence on each of the following: 6M

1) Desert:.....
2) Gerbils:.....
3) Snake:.....
4) Darkling Beetles:.....
5) Mongooses:.....
6) Camel:.....

Qu. 3- Write five characteristics of Desert. 5M

1).....
2).....
3).....
4).....
5).....

Qu. 4 Write true or false. 4M

1) Deserts are endless sand dunes.....
2) Most snakes are harmless.....
3) Snakes can not hear, but they can feel vibrations through the ground.....
4) Camels store water in their humps.....

Index of Learning Styles Questionnaire

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Directions

ase provide us with your full name. Your name will be printed on the information that eturned to you.

Full Name

_____

For each of the 44 questions below select either "a" or "b" to indicate your answer. Please choose only one answer for each question. If both "a" and "b" seem to apply to you, choose the one that applies more frequently. When you are finished selecting answers to each question please select the submit button at the end of the form.

1. I understand something better after I
   - ○ **(a)** try it out.
   - ○ **(b)**think it through.
2. I would rather be considered
   - ○ **(a)** realistic.
   - ○ **(b)**innovative.
3. When I think about what I did yesterday, I am most likely to get
   - ○ **(a)** a picture.
   - ○ **(b)**words.
4. I tend to

- **(a)** understand details of a subject but may be fuzzy about its overall structure.
- **(b)**understand the overall structure but may be fuzzy about details.

5. When I am learning something new, it helps me to
   - **(a)** talk about it.
   - **(b)**think about it.
6. If I were a teacher, I would rather teach a course
   - **(a)** that deals with facts and real life situations.
   - **(b)**that deals with ideas and theories.
7. I prefer to get new information in
   - **(a)** pictures, diagrams, graphs, or maps.
   - **(b)**written directions or verbal information.
8. Once I understand
   - **(a)** all the parts, I understand the whole thing.
   - **(b)**the whole thing, I see how the parts fit.
9. In a study group working on difficult material, I am more likely to
   - **(a)** jump in and contribute ideas.
   - **(b)**sit back and listen.
10. I find it easier
    - **(a)** to learn facts.
    - **(b)**to learn concepts.
11. In a book with lots of pictures and charts, I am likely to
    - **(a)** look over the pictures and charts carefully.
    - **(b)**focus on the written text.
12. When I solve math problems
    - **(a)** I usually work my way to the solutions one step at a time.
    - **(b)** I often just see the solutions but then have to struggle to figure out the steps to get to them.
13. In classes I have taken
    - **(a)** I have usually gotten to know many of the students.
    - **(b)** I have rarely gotten to know many of the students.
14. In reading nonfiction, I prefer
    - **(a)** something that teaches me new facts or tells me how to do something.

(b)something that gives me new ideas to think about.

15. I like teachers

(a) who put a lot of diagrams on the board.

(b)who spend a lot of time explaining.

16. When I'm analyzing a story or a novel

(a) I think of the incidents and try to put them together to figure out the themes.

(b) I just know what the themes are when I finish reading and then I have to go back and find the incidents that demonstrate them.

17. When I start a homework problem, I am more likely to

(a) start working on the solution immediately.

(b)try to fully understand the problem first.

18. I prefer the idea of

(a) certainty.

(b)theory.

19. I remember best

(a) what I see.

(b)what I hear.

20. It is more important to me that an instructor

(a)lay out the material in clear sequential steps.

(b)give me an overall picture and relate the material to other subjects.

21. I prefer to study

(a) in a study group.

(b)alone.

22. I am more likely to be considered

(a) careful about the details of my work.

(b)creative about how to do my work.

23. When I get directions to a new place, I prefer

(a) a map.

(b)written instructions.

24. I learn

(a) at a fairly regular pace. If I study hard, I'll "get it."

(b)in fits and starts. I'll be totally confused and then suddenly it all "clicks."

25. I would rather first
   - (a) try things out.
   - (b)think about how I'm going to do it.

26. When I am reading for enjoyment, I like writers to
   - (a) clearly say what they mean.
   - (b)say things in creative, interesting ways.

27. When I see a diagram or sketch in class, I am most likely to remember
   - (a) the picture.
   - (b)what the instructor said about it.

28. When considering a body of information, I am more likely to
   - (a) focus on details and miss the big picture.
   - (b)try to understand the big picture before getting into the details.

29. I more easily remember
   - (a) something I have done.
   - (b)something I have thought a lot about.

30. When I have to perform a task, I prefer to
   - (a) master one way of doing it.
   - (b)come up with new ways of doing it.

31. When someone is showing me data, I prefer
   - (a) charts or graphs.
   - (b)text summarizing the results.

32. When writing a paper, I am more likely to
   - (a) work on (think about or write) the beginning of the paper and progress forward.
   - (b)work on (think about or write) different parts of the paper and then order them.

33. When I have to work on a group project, I first want to
   - (a) have "group brainstorming" where everyone contributes ideas.
   - (b)brainstorm individually and then come together as a group to compare ideas.

34. I consider it higher praise to call someone
   - (a) sensible.
   - (b)imaginative.

35. When I meet people at a party, I am more likely to remember

- (a) what they looked like.
- (b)what they said about themselves.

36. When I am learning a new subject, I prefer to
    - (a) stay focused on that subject, learning as much about it as I can.
    - (b)try to make connections between that subject and related subjects.
37. I am more likely to be considered
    - (a) outgoing.
    - (b)reserved.
38. I prefer courses that emphasize
    - (a) concrete material (facts, data).
    - (b)abstract material (concepts, theories).
39. For entertainment, I would rather
    - (a) watch television.
    - (b)read a book.
40. Some teachers start their lectures with an outline of what they will cover. Such outlines are
    - (a) somewhat helpful to me.
    - (b)very helpful to me.
41. The idea of doing homework in groups, with one grade for the entire group,
    - (a) appeals to me.
    - (b)does not appeal to me.
42. When I am doing long calculations,
    - (a) I tend to repeat all my steps and check my work carefully.
    - (b) I find checking my work tiresome and have to force myself to do it.
43. I tend to picture places I have been
    - (a) easily and fairly accurately.
    - (b)with difficulty and without much detail.
44. When solving problems in a group, I would be more likely to
    - (a) think of the steps in the solution process.
    - (b)think of possible consequences or applications of the solution in a wide range of areas.

When you have completed filling out the above form please click on the Submit button below. Your results will be returned to you. If you are not satisfied with your answers above please click on Reset to clear the form.

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