CHAPTER III

REVIEW OF RELATED LITERATURE

3.1. Studies Related to Models of Teaching in General
3.2. Studies Exclusively of Advance Organizer Model
3.3. Studies Exclusively of Inductive Thinking Model
3.4. Studies on Synectics Model
CHAPTER III

REVIEW OF RELATED STUDIES

Research cannot be treated as an isolated piece of work. Hence every research project should be based on research that has preceded it. It will naturally echo the endless research work of yester years. “The identification of a problem, development of a research design, and determination of the size and scope of the problem, depend to a great extent on the care and intensity with which a researcher has examined the literature or other research studies and authoritative writings related to the problem under investigation” (Mouley, 1964). The survey of related studies implies treating, studying and evaluating reports of relevant researches, study of published articles, going through related portion of encyclopedias and research abstracts, study of pertinent pages out of comprehensive books on the subject and going through related manuscripts if any (Borg & Gall, 1989). The review of related studies involves the systematic identification, location and analysis of documents containing information related to the Research Problem (Gay, 1996). The systematic canvas of the related studies helps in determining whether the proposed study unnecessarily duplicates some earlier investigations. A summary of the writings of recognized authorities and of previous research provides evidence that the researcher is familiar. The knowledge acquired from such reading in terms of course, procedures and results represent essential orientation for the definition of the problem, selection of the method and interpretation of findings; moreover it can contribute to the general scholarship of the investigator.

Citing studies that show substantial agreement and those that seem to present conflicting conclusions help to sharpen and define understanding of existing knowledge in the problem area, provides a background for the research project and makes the reader aware of the status of the issue. Thus according to Best and Khan (2004), “this part of the research report provides a background for the developments of present study and brings the reader to up to date”.

The purpose of the literature review was to comprehensively investigate ideas, issues and themes related to the effectiveness of certain Information Processing Models on achievement in English of students at secondary level. For that the investigator collected as many studies as possible related to the problem under investigation. The studies collected are given under the following heads.

The review of related studies presented in this chapter falls under four major heads.

3.1. Studies related to Models of teaching in General

3.2. Studies related to exclusively of Advance Organizer Model

3.3. Studies related to exclusively of Inductive Thinking Model

3.4. Studies related to exclusively of Synectics Model.

3.1 Studies Related to Models of Teaching in General

The Models of Teaching usually adopted by the researchers are developed by Bruce Joyce and Marsha Weil (1980). These models have been categorized into four families depending upon the nature of specific objectives to be achieved through these models. They are:-

Information Processing Model

Social Interaction Model

Personal Model and

Behaviour Modification Model

In the a few years research in this area of models of teaching has mainly seemed to be concentrated on the information processing family. Many studies were formed in this area. For better analysis they were classified as those in which individual models have been taken up and those in which two or more models were used. In some studies individual models have been taken up such as Concept Attainment model (Mehra, 1986; Aggarwal & Misra, 1988; Chaudury, 1985; Gough, 1991; Manocha, 1991; Ayishabi, 1996; Prabhakaran & Rao, 1998; Minikutty 2005), Advance Organizer Model (Ghosh, 1986; Kaushik, 1988;

Morz and Mulgrew (2012) conducted studies on Breaking Ground in Higher Education and found that the educational challenge today is to prepare students not only for today’s business realities, but also for tomorrow’s possibilities. It is their obligation to respond to these changes by exploring innovative models of teaching and learning, and to continue working together to better meet student’s needs.

Nordyke (2011) did studies on Models of Teaching. In his study models of teaching indicated that This study results the teacher trained in the models of teaching in a pre-service programme were more likely to use the models correctly in classroom instruction. Additionally the findings suggested that teachers identified similar factors that influenced their selection of pedagogical practices for classroom instruction regardless of the time period in which they were trained in the models of teaching.

Allphin (2011) conducted studies on Teacher Application and Enactment of Models of teaching. The study concluded that teacher education is related to the pedagogical content knowledge. It did not favour either pre-service professional development. The study also suggested that teachers are heavily on their philosophy of teaching and learning when making pedagogic decisions.

Kolb and Kolb (2010) proceeded an experimental learning framework for understanding how play can potentially create a unique lucid learning space conducive to deep learning. This case study suggested that play in a lucid learning space can promote deep learning in the intellectual, physical spiritual and moral realms.
Erdogan and Baren (2009) studied the effect of mathematics teaching provided through drama in the mathematical ability of six year old children. The study revealed that teaching of the mathematical concepts through entertaining activities, in which the children want to participate and can be active, will be more appropriate since these concepts are abstract and relatively hard to learn in the pre-school period. Therefore, drama method should be used in teaching mathematical concepts pre-school education institutions.

Crisen and others (2008) found that the effective instructional practices developed are a combination of pedagogical skills and ICT knowledge for conceptualizing secondary school mathematics teacher’s classroom practices.

Kumar (2004) in his study made an effort to determine the impact of Inductive Thinking Model on the learning to Physical Science with reference to Knowledge, understanding, application and retention to information levels. The result showed that the inductive thinking model is superior to ordinary classroom practices followed in Physical Science instruction like verbal illustration and demonstration with respect to levels of learning namely understanding, application and retention of information. But it is most effective at Knowledge level.

Mary (2001) concluded from the study that information processing models of teaching is more effective then the teacher centered conventional method in teaching Geography. The result was significant with respect to the immediate post test scores as well as the delayed post test scores. AOM was found to be more effective than the other two models.

Pritchard (1999) had the view that the concept attainment model helps students to develop skill for inductive and deductive thinking while learning subject matter in any field in constructive meaningful way. Also the model offers the teachers a method for teaching, thinking across the curriculum using the subject matter of the discipline they teach.

Remadevi (1998) reported from her studies that students taught through information processing models of teaching were found superior to the students
taught through the traditional method of teaching with respect to achievement and attitude towards chemistry.

Vaidya (1997) studied the effect of mastery learning and concept attainment model on achievement in Hindi and self-concept and attitude towards Hindi to upper primary school children. Mastery learning model was found to be more effective than CAM in enhancing achievement as well as self-concept.

Ayishabi (1996) compared the effect of Concept Attainment Model and traditional methods in teaching Zoology at Plus-Two level and found that there was no significant difference in the attainment of concepts in the selected topics between experimental and control groups.

Nelson and Pan (1995) constructed an instructional programme to study the effectiveness of CAM using Video disc images and hyper cards and found that the constructed Instructional programme is more effective than the lecture method.

Anuradha and Anand (1993) studied the impact of CAM on mental ability and general ability of social science students and found that more effective than the traditional methods.

Gough (1991) found that CAM of instruction is one of the most effective methods to develop student’s higher order thinking skills.

Vincy (1992) found computer assisted model of teaching to be superior to the concept attainment model for teaching concepts in mathematics and for inculcating positive attitude towards Mathematics. Johnson and others (1992) evaluated that students get experience in conceptual thinking. When Concept Attainment Model is used as the student work together upon the shared meaning of the concept and then reflect their thinking. Mehra (1986) and Jang (1995) found that the pupils taught through Concept Attainment Model gained significantly more than those taught through traditional methods.

Gautam (1992) conducted a study on “Development of creative thinking and leadership among Navodaya Vidyalaya students.” The findings of the study
were: 1) There was no significant sex difference in the development pattern of creative thinking, though girls tended to be more creative than boys on the dimensional scores of fluency, flexibility and originality as well as on total scores on creative thinking. 2) The high and low socioeconomic students groups of subjects did not differ in creativity. 3) There was a significant development pattern from grade VI to VIII among students of Himachal Pradesh in total leadership behaviour.

Mahajan (1992) found that during the peer group sessions as well as classroom teaching sessions the group taught CAM was found to be superior to the group taught by AOM as well as the routine method as far as the teaching ability of student teachers was concerned.

Mohanty (1992) compared jurisprudential inquiry model with concept attainment model in the development to moral concepts and judgement and the personal values of class VIII pupils. The findings indicated JIM more effective for developing the moral judgement and the personal values of students whereas CAM was effective in developing moral concepts.

Another study by Khan and Siddiqui, (1992) on effectiveness of concept strategies whether effective over the traditional approach and that personality factors have no significant effect on the concept attainment process.

There were studies by Kaur (1991) and Jaimini (1991) which aimed at comparing the effectiveness of CAM and AOM in relation to the creativity of students. They came to the conclusion that both CAM and AOM are effective in Economics and in Chemistry respectively and that AOM is more effective than CAM in creativity of students.

Passi, Singh and Sansanwal (1991) together conducted an elaborate three phase experimental study of CAM and ITM under the guidance of Bruce Joyce, aimed at finding the efficacy of the training strategy adopted for training application in Indian classroom conditions. It is a study on development of training in CAM and ITM, which brought about significant favourable changes in
the attitudes of both the teacher educators and the student teachers towards the models.

Gupta (1991) found Inductive Thinking Model to be more effective than the concept attainment model when compared on achievement and also in promoting right attitude towards science. In Bawa’s study (1991) attempted to review the research possibilities on conceptual learning (Bruner’s View) and indicated that there is a depth of research studies in the area of concept learning.

Aziz (1990) developed teaching programmes in specified content areas in chemistry to teach inductively through Concept Attainment Model and Inductive Thinking Model and compared it with the traditional teaching programme. Result indicated that the group based on Information Processing Model performed significantly better than the pupils taught through lecture method. Instructional materials prepared by Buddhisagar (1987) based on Operant Conditioning Model and Advance Organizer Model for teaching educational psychology was found to be equally effective in terms of achievement of students.

Singh (1990) investigated the comparative effectiveness of inquiry training model and concept attainment model as compared to the traditional method in terms of gain in achievement scores and change in attitude to the pupils towards physical science. Both the models were found to be equally effective with respect to the scores in achievement and attitude.

There were some studies in which two or more models were used. There were some studies in which the effectiveness of two models has been compared. The studies by Good (1990) and Mahajan (1992) compared AOM with CAM, CAM was compared with JIM (Mohanthy, 1992), with the Inquiry Training Model (Singh, 1990) and with mastery learning by (Vaidya, 1990).

Bhaveja (1989) in her study compared the effectiveness of AM with Inductive Thinking Model in regard to the concept learning in Biology and also analysed the thinking strategies used by the learners. The findings were supporting the role of Inductive Thinking Model in the process of conceptualization and generalisation. Sau (1988) carried out a review study of
research on the information processing models of teaching. Findings to this study indicated that most of the studies were single dimensional although the concept was multi-dimensional. Aggarwal and Mishra (1988) studied the effectiveness of the Reception strategy in enhancing the attainment of science concepts and found that it is to be effective. Dixit (1988) studied information acquisition strategies of college students in relation to a number of social demographic and psychological variables.

Sushama (1987) found both concept attainment and biological science inquiry model is significantly superior to conventional teaching in terms of pupil achievement. Pandey (1985) reported that both advance organizer model and inquiry training model is significantly superior to the traditional method in terms of pupil achievement whereas all the three were equally effective in terms of pupils attitude towards social science. Anderson (1983) describes a neuromathematical model of human information processing and its application to science content acquisition.

D’lima and Suvarna (1980) compared the effectiveness of the reception and selection strategies of concept attainment model in teaching mathematics. The study revealed that the reception oriented model is more effective than selection oriented model in teaching mathematics.

Shineman (1980) investigated the effects of information behaviour on student teachers having similar or different conceptual level on the initial and final information processing. Significant difference was found between high and low conceptual level student teachers on information processing ability.

Eggen et al (1979) listed that the major goals of information processing models in the classroom are the following.

1) The development of intellectual capabilities such as the ability to reason and think more logically.

2) The acquisition to content and

3) The mastery of methods of enquiry.
3.2 Studies Exclusively of Advance Organiser Model

The Advance Organiser Model was formulated by David P. Ausubel (1960-1963) designed to teach interrelated bodies of content. Lin and Chen (2007) conducted experimental study to compare the effects of different types of computer generated visuals (static versus animated) and advance organizers (descriptive versus question) in enhancing comprehension and retention of a content-based lesson for learning English as a foreign language (EFL). Additionally, the study investigated the interactive effect of students existing reading proficiency level and the above mentioned treatments on their reading comprehension achievement. The result showed that the animation group is more effective than the static visual group. One of the four texts and that animation embedded with a question advance organizer had a marginal effect among the four treatments in facilitating the acquisition of L₂ reading comprehension both for the immediate and delayed posttests.

Bastick (1999) conducted a study to investigate the assumption that students use instructional objectives as advance organizers. Results showed 29.8% of students with the best recall ability (students who were able to remember all four objectives) could not tell which objective was not used and therefore did not use the objective as a conscious strategy for advance organization of the lesson material.

Daros and Onwuegbuzie (1999) conducted a study to determine the effectiveness of using advance organizers in instruction at graduate level. Their findings showed that the students in the advance organizer sections of course obtained higher level of overall achievement than did their counterparts.

Herron and others (1998) compared student retention of information in foreign-language videos in the advance organizer conditions. Participants were 67 college student enrolled in five sections of a beginning level French course. Findings were interpreted as supportive of the premise that it is significantly better to incorporate an advance organizer with video.
Kang (1997) investigated whether an advance organizer could facilitate learning in a computer simulation environment using HyperCard. It examined the differential effectiveness of an advance organizer across three different grade students-fifth, sixth and seventh. Analysis of data showed significant difference between the organizer and non organizer groups.

O’Neil and Dwyer (1996) conducted studies on ‘the effect of adding visualization and rehearsal strategies to Advance Organizers on Facilitating Long term Retention and they found the difference in long term-retention when prior knowledge was controlled, no interaction between prior knowledge and advance organizers strategies, no increased achievement with visuals.

Swarup and others (1987) and Drowning (1994) obtained the result that the instructional materials with advance organizer more effective. Ghosh (1986) found that the prose passage type and pictorial type advance organizers facilitated the retention of life science subject matter even after an interval of four weeks. Alexander (1984) arrived at an inference of the correlative effects of learning style performance on learning when an additional organizer was used. Borne (1982) found that the use of advance organizers had a significant effect on delayed retention level readers but no significant difference in the case of above level readers.

Noel (1983) found that while students benefits from systematically designed instruction to teach rules, Advance organizers incorporated in that instruction do not necessarily enhance learning transfer.

Ausbubel and Mohammed (1964) suggested previously learnt relevant background knowledge significantly facilitated the learning and retention of the first two parallely related unfamiliar learning passages. Fitzgerald (1962) studied the effect of an Advance Organizer, Antecedent Learning and Retention of two familiar sequential passages about criminology.

conducted studies on the effectiveness of different training strategies for Advance Organizer Model in terms of understanding competence reactions and pupils linking and found that Advance Organizer Model is very much effective in realizing the instructional objectives compared to the conventional methods of teaching. The Advance Organizer Model was found to be effective in developing teaching competence among student teachers under stimulated as well as classroom conditions (Gupta, 1991). Kaushik (1988) studied the long-term effect of Advance Organizers in relation to reading ability, intelligence and scientific attitude of the learners, found that the general introduction or an overview which generally proceeds learning material is less effective as compared to the advance organizers.

3.3 Studies Exclusively of Inductive Thinking Model

Kroflic (2012) conducted studies on the Role of Artistic Experiences in the Comprehensive Inductive Educational Approach found new answers to the question of how education can prepare individuals for life in an age of late modernity. This paper presents the idea of approaching identity and moral development through the inductive educational approach and highlights the important of education through the arts in the latter, especially in new of the theoretical notion of aesthetics as ethics of post modernity.

Vogel, Herron, Cole and York (2011) conducted studies on “Effectiveness of a Guided Inductive versus a Deductive Approach on the Learning of Grammar in the Intermediate level college French classrooms. Its findings indicated a significantly greater effect of the guided inductive approach on short term learning. The long term findings and the relationships between preferences and performances were not significant. Analysis indicated that students who preferred explanations of the rules performed better with a guided inductive approach.

Studies conducted by Soroush and Weinberger (2009) presents a successful application of inductive learning in process modeling. It describes two process modeling courses that use inductive learning method such as inquiry learning and problem based learning, among others.
Liao and Chen (2009) made a comparative study on the rhetorical strategies for argumentative writing in Chinese and English composition textbooks. The textbooks were selected based on four criteria. The result of the study revealed that there are similarities and differences in Chinese and English argumentative writing. Both Chinese and English agree upon the function of argumentative writing, encourage writers to voice their personal opinions, adopt a similar macrostructure for argumentative writing, recommend placing the thesis statement in the introduction, share, similar strategies for writing the introduction and the conclusion, and share several strategies to support the argumentation. In addition they both recommend deductive and inductive reasoning, emphasize emotional appeals, and stress the necessity of addressing the opposing views.

Empirical study of Mohammed and Jaber (2008) presented the description of two teaching Methods “deductive” and Inductive” Teaching approaches. The first involved providing a group of participants with rules and these examples directly and separately, but the second approach involves providing another group of participants with examples or content without offering explicit grammar rules, and the students should induce such rules by themselves. This study investigated the effects of each approach and the interaction between “the type of teaching approach” and the “use of the active and passive voice sentences” in English as a foreign Language (EFL). The result of the study revealed a significant statistical result at the level of 05 between the two approaches for the deductive group. But there is no significant difference between classes for the same type of approach.

Graham and Kilbreath (2007) conducted studies in the role of words and gestures in guiding infants inductive inferences about monobvious was examined. The results indicate that 14 month-olds possess a more generalized symbolic system as they will relay on both words and gestures to guide their inferences. By 22-months of age infants treat words as a privileged referential form when making inductive inferences.

Truxaw and DeFranco (2007) conducted a study titled as “An Inductive Model of Teaching for Orchestrating discourse”. They propose a strategic mix of
univocal and dialogic discourse that when used in conjunction with an “Inductive Model of Teaching” can promote Mathematical understanding in students.

Canadas and Others (2007) conducted studies by using a Model to describe student’s Inductive Reasoning in Problem solving and they presented some aspects of wider investigation whose main objective was to describe and characterize Inductive Reasoning used by Spanish students in years 9 and 10 when they work on problems that involved linear and quadratic sequences method. They produced a test composed of six problem characteristics.

Kinshuk, Lin and McNab (2006) regarded inductive Reasoning as one of the seven primary mental abilities that account for human intelligent behaviour. They have also shown that inductive reasoning ability is one of the best predictors for academic performance. Modeling of Inductive Reasoning is therefore an important issue for providing adaptability in visual learning environments.

Inductive Thinking Model is an adaptation from the work of Hilda Taba (1966). The study conducted by Worthern (1968) proved that inductive process increases the retention of information. Apparently the process of forming concepts enables the learners to fuel mental scaffolding that held the information better than the structures provided in an expository manner to the learners. James and Lyn (1995) studies children’s application of simultaneous and successive processing in Inductive and Deductive reasoning problems. The studies of Schwab (1965) and Tennyson (1986) also cause to the conclusion that students can learn Inductive Process. Bhaveja (1985) in her two studies compared the effectiveness of one with Taba’s Inductive Thinking Model in regard to the concept learning in Biology and also analyzed the thinking strategies and by the learners. The findings are quite similar in the two studies which support the role of Inductive thinking process in the process of conceptualization and generalization.

3.4 Studies on Synectics Model

The Synectics Model is designed by William J.J. Gorden (1961). It is a very interesting approach to the development of innovations. This model aims, in
developing students’ creative thinking capacity, problem solving ability and group work.

Laura (2006) made study titled as “Synectics for Creative Thinking in Technology Education” and found that synectics outlines the processes that people can use to help them overcome mental black, white working an efficient tasks by using people’s divergent thinking and capacity for solving problems increase, can apply to teach students to solve a multitude of academic challenges. It identified the effect of synectics for people’s divergent thinking and capacity for problem solving techniques.

Studies of Wilsing and Akpinar (2004) highlights the imagination of human beings and the exploration of novel ideas have always contributed to development in science. This development lead us in to re-examine the existing structures in our environment and society so that they can be further improved by the application of synectic strategies.

Brewbaker (2001) outlines exercise for high school and college students that use students written poems, published adult poems, and synectics a (game-like forced comparison between dissimilar objects) to help students understand writers most powerful comparison device.

Callison (1998) examines creative thinking in relation to modern instructional programmes and information literacy and compares creative and critical thinking. Discusses teaching for thinking techniques for sparking creativity, activities for creating a mental museum, synectics (a group of creative process to create new insights) and creating meaning through story and reflection.

Meier (1997) made studies on exploring ideas through Synectics. This study defines “Synectics” as the bringing together of diverse elements and as a strategy; it depends upon thinking by analogy or metaphor.

Dykstra and Dykstra (1997) conducted a study on “Synectics for Modeling poetry Writing” and their findings include:- (1) starting out by reading poetry aloud to student without analyzing it; (2) beginning the writing with a list of poems-students jot down words as quickly as they are perceived without
worrying about final composition; and (3) beginning through prose writing which frees the student to follow the flow of their words. The student then rewrite the prose piece with the addition of metaphors, trying to imagine what they wrote in a different light using Gardon’s mechanisms.

Siau (1996) made a study on Electronic Creativity Techniques for Organisational innovation for the purpose he compared Group Creativity techniques such as electronic brain storming with a brain storming approach involving plus, minus and interacting points (PMI)- Synectics and their verbal counter parts. Electronic PMI and Synectics are found to be better than electronic brain storming in evoking creativity.

Land (1995) found that Synectics Modeling steps help journalism students in feature writing break left-brain dependence and make right- and left-brain connection to endeavour their writing.

Meador (1994) conducted study on the effect of Synectics Training on Gifted and Non gifted Kindergarten Students. He made comparison of 107 Kindergarten children who either were or were not in a gifted program and received or did not receive special training in Synectics. Special training in synectics found significant improvement in creativity scores for experimental but not for control groups but not more for gifted than for non gifted children.

According to the findings of Couch (1993) synectics is an approach to creative thinking that depends on understanding together that which is apparently different. Its main tool is analogy or metaphor. The approach, which in from used by groups, can help students develop erective responses to problem solving to retain new information to assist in generating writing and to explore social and disciplinary problems, it helps users break existing mind sets and internalize abstract concepts. Synectics can be used with all ages and works will with those who withdraw from traditional methods. Teacher-facilitators can use synectics in the classroom by leading students to: (1) describe a topic by generating words or phrases; (2) generate a list of vivid mental images and are directly analogous to the first list created. (3) select one of the direct analyses and create a personal
analogy by becoming the object they choose and describing what it feels like; (4) find word pairs that seem to be contradictory but actually yield creative insight, (5) choose one of the conflicting pairs and create a different direct analogy by generating examples of things that have the same compressed conflict; (6) reexamine the original topic to produce a product or description that uses the ideas generated in the process.

Weaver and Prince (1990) made studies on Synectics and its potential for education. The findings of the study were, Synectics is a creative problem solving process carrying participants from problem analysis to the generation and development of new ideas. The system recognizes three type of thinkers: apposite, divergent and generative Effective thinking is often limited by maintaining inflexible criteria concerted thinking, insisting an literal meaning, prematurely limiting connections and self censoring activity.

Kumari (1990) conducted a study on “Instructional and nurturing effects of synectics model of teaching on the creative abilities in languages”. The findings of the study were: 1) Grade levels affected the improvement in language creativity (Hindi, English and general). In all the three spheres, the students of IX were found most creative and class VIII was found more creative than IX concerning fluency and flexibility. 2) The synectics model of teaching affected the improvement in all the five aspect of language creativity. The intelligent student was found more creative in fluency, flexibility, originality and elaboration. 3) Improvement was notices in all the form of components e.g. Unity, coherence, originality and fallacies of essay/paragraph writing in increasing manner.

Malhotra (1990) conducted a study on “Effects of Synectics method of teaching on the development of Language creativity in Hindi.” The findings of the study were: Students who were exposed to the synectics method of teaching showed significant improvement on all the four factors viz. fluency, flexibility, originality and elaboration as well as on the total scores of the plot building aspects of language creativity with the levels of intelligent in all the four factors i.e. fluency, flexibility, originality and elaboration as well as their summated
scores. The creativity affected improvement in all the four factors as well as their total scores in their descriptive style.

Martis (1990) and Couch (1993) attempted to find out the effectives of the Synectics Model in developing making strange familiar (MSF) and came to the conclusion that Synectics is an approach to creative thinking and to see the familiar in unfamiliar ways or the unfamiliar in familiar ways.

Dodd (1988) made a detailed study of the learning behaviours. In service teachers learning to use Two New Models of Teaching,. The major objective of this study was to observe the learning behaviours to teachers selected by their school districts to attend a training institute to learn some new ways of teaching. The teachers expected to use these new was to teaching themselves and also to conduct training for other teachers in their own districts.

Stark (1987) made studies on a “Developing Critical and Creative Thinking through the use of the Synectics Teaching Model”, and shares how she used the Synectics Model in a class she taught on family and communication at the undergraduate level. The model encourages students to develop new ideas using narration and emotional states of mind and is intended to increase creativity empathy and problems solving capacity.

McAuliff and Stoskin (1987) conducted studies on Synectics; The Creative Connection; Maryland United States and found that the Synectics model is an exciting strategy for development of thinking skills for gifted and creative children. The three-phase strategy teaches about direct analogy personal analogy, and symbolic analogy.

Springfield (1986) conducted studies on Synectics: Teaching Creative Problem solving by Making the Familiar Strange. This study describes the theory of Synectics as an idea producing process and shows how upper elementary gifted students can be taught to use Synectics in more effective problem solving.

Heavilion (1982) conducted a study on the Use of Synectics as an aid to invention in college composition. Analysis of the data indicated the following: (1) Most students used analogical thinking an all of the themes; (2) although most
students used divergent thinking on at least one theme, few used divergent thinking on the final theme; and (3) most students had a more positive attitude toward English thin previous writing experiences. These findings suggest that students learn to think analogically, did not learn to think divergently as a whole, and did not develop a more positive attitude towards writing.

Conclusion

It is evident from the foregoing research reviews that the area of Models of Teaching has been attaining due importance and significance and attracting the attention of educational practioners all over the world. The scope, the definition, the objectives and the hypothesis have been formulated on the basis of the previous research studies. In the present study, the strategies and process of previous researches have been applied in the teaching of English in a new context and area. Therefore the study attains its credibility on the basis of the reviews through which the focus, the objectives, the hypothesis, the experimental design and statistical interpretations were formulated.