Chapter – VI

Summary and Conclusions
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SUMMARY AND CONCLUSIONS

6.1 INTRODUCTION

English holds today the place of pride as the world's most widely used language. It is known in almost every country of the world; and one person out of every four on earth can be reached through it as over 50% of the world's newspapers, scientific and technical periodicals and more than 60% world's radio stations use English as a medium of communication. It is the international language for greater understanding and interlinking the people in other countries. It is no wonder that the English language continues to occupy a prominent place in our school curriculum.

Research on teaching English as a second language has, therefore, assumed great importance. Curriculum, methods of teaching, development of instructional material, approaches and evaluation have provided areas of investigation in recent years. Curriculum and methods are closely interconnected with each other.


With the impact of modern technology along with rapid strides of development in modern instructional techniques, there is strong urge to refine
and improve our teaching strategies and instructional techniques with a view to realizing the fullest potentialities of the individual learner.

Modern instructional techniques like programmed instruction, the model approach, learning packages, personalized system of instruction, modular approach emphasized the aspects of self-learning as they maximize the learning effects. These instructional strategies provide self-teaching study materials to students so that they can learn and progress at their individual speed. Studies on the effective use of learning packages, personalized system of instruction and self-instructional strategies have attracted the attention of some researchers.


Kaur, R. (1981); Khan, A.R. (1983); Prabhune, P.P. (1984) and Rabindradas, B. (1984) observed that self-instructional teaching device was significantly more effective strategy as compared to conventional classroom teaching.


Thus, the multi-media approach, which incorporates a variety of instructional modes and media in a teaching situation, appears a promising area of research.
The perennial quest for effective and purposeful teaching and learning of English requires new strategy in the face of knowledge explosion and emergence of new trends and approaches. From the review of research conducted, it can be ascertained that efforts at finding out the significance and effectiveness of a large number of analytical approaches/methods/techniques in transacting curriculum are indicative of the prime place given to the components of developing learning experiences in the form of instructional strategies.

Modern day proposal for individualized technique is modular strategy, which is more recent development than either personalized system of instruction or learning packages or audio tutorial. Module represents a self-contained instructional package covering a single conceptual unit of subject matter. The idea of module did not have its inception in any one individual or individual groups, but was generated spontaneously by many people interested in improving education and instructional design. The use of modules grew rapidly through the 1960s and 1970s and currently the modular strategy is well entrenched as a means of tailoring instruction to individual needs.

Module represents one of the specific forms of instructional materials. In a workshop on the application of educational technology for the preparation of instructional material held at Tagaytay city, the Philippines in 1976, it was agreed upon that “a module is a learning opportunity organized around a well defined topic which contains the element of instruction, specific objectives, teaching-learning activities and evaluation.”

Modular strategy enables a teacher to organize numerous sequences of experience to reflect special interests of the teacher in the student, focus on student deficiencies in subject matter, assess the student’s progress in learning, leave the teacher free to engage in personal contact with the student, update study materials without major revisions, serve the models for individual teachers, reduce the chances of failure and exchange self-instructional units among institutions.

In the same way, the modular approach offers avenues for individualized study on the part of the student as the instructional strategy provides the facility
to involve the students in learning process, permit students to explore portions of subjects of particular interest, progress at their own pace, leave already familiarized material and save time, master each module completely before proceeding to the next, and develop a sense of responsibility for his or her own learning (Husen, T. and Postlethwaite, T.N.; 1985).

In the present study, three instructional strategies were employed by the investigator.

1. **Self-Learning Module** is a self-contained unit, designed for a specific purpose which includes a set of activities intended to facilitate learner's achievement. It is a self-instructional unit, self-paced, employing different types of media and is part of more comprehensive instructional system.

2. **Modular Instructional Strategy with Teacher Intervention** promotes active intervention between learner, teacher and material that would ensure learner's active participation. The instructional materials are designed to allow sufficient scope for active human interaction. This strategy further helps the students to develop better understanding and application of the concept of different topics.

3. **Conventional Method** is the system of education prevailing in high schools that is characterized by an annual system of examinations conducted mainly through written mode consisting of essay and short answer type of items. The teaching methods are accordingly text book-oriented and focused on reading and writing alone.

**MODULE: CONCEPTUALIZATION**

Abedor, A.J. (1978) considered a self-learning instructional module as a set of self-contained material used independently by student to achieve a predetermined set of learning outcome.

Husen, T. and Postlethwaite, T.N. (1985) in the International Encyclopedia of Education stated module as a self-contained and independent unit of instruction with the primary focus on a few well-defined objectives. The substance of a module consists of materials and instructions needed to
accomplish these objectives. The boundaries of a module are definable only in terms of stated objectives.

**Sharma, R.A. (2001)** believes that the instructional module is a unit of learning, which includes a set of activities intended to facilitate the learner’s achievement of specific objectives. It is a relatively self-contained unit, designed for a specific purpose and is a part of a broader, more comprehensive instructional system. For him, following are the components of a module:

- the rationale
- the objectives
- the pre-assessment tests
- the enabling activities
- the post assessment
- the feedback mechanism

According to **Creager, J.G. and Murray, D.L. (1971)**. “A module consists of the following components:

(a) statement of purpose;
(b) desirable pre-requisite skills;
(c) instructional objectives;
(d) diagnostic pre-test;
(e) implementer for the module;
(f) the modular program;
(g) related experiences;
(h) evaluative post-test;
(l) assessment of module.”

Above-mentioned definitions highlight some of the specific characteristics, such as a specific and small self-instructional unit, self-paced, employing
different types of media, having specific steps ranging from objectives to evaluation, etc. Modules can be a part of more comprehensive strategy of instruction. These can well be used by different types of target groups.

**ACHIEVEMENT MOTIVATION**

The concept of achievement motivation was developed by McClelland, D.C. (1953) who refers to the motive as to achieve some standards of accomplishment or proficiency as reflected in competition set by oneself or others. He further believed that achievement motive is learned behaviour, which is associated with affective arousal and is a relatively stable personality characteristic and each individual constantly possesses a motive to achieve success, though its degree varies from individual to individual.

DeCecco, J.P. (1970) defined achievement motivation as expectancy of finding satisfaction in mastering challenging and different performances.

According to International Encyclopedia of Social Sciences (1972) “Achievement Motivation is an important determinant of aspiration, effort and persistence when an individual expects that his performance will be evaluated in relation to some standard of excellence. Such behaviour is called achievement oriented (Sills, D.L.; 1972)”.

Magill, F.N. (1996) in International Encyclopedia of Psychology considers achievement motivation as the tendency to strive for success or the attainment of a desirable goal. Embedded within the definition are number of important implications. First, achievement motivation involves an inclination on the part of the individual and how the personality influences a motivational state given the presence of certain environmental factors. Second, it involves a task-oriented behavior that can be evaluated. Third, the task orientation is related to some standard of excellence that may be either internally (by the person) or externally (by others) imposed. It plays an important role in individual and societal accomplishments.

Mehndiratta, M.C. (1997) has defined achievement motivation as psychological need and energetic drive that prompts an individual to strive for
and work towards mastering his or her environment by the successful accomplishment of a goal or goals accompanied by a sense of satisfaction and self-worth.

Colman, A.M. (2001) has defined achievement motivation as a social form of motivation involving a competitive drive to meet standards of excellence.

From the above definitions, it can be concluded that achievement motivation is a strong urge to excel. It refers to the behavior of an individual who strives to accomplish something, to do his best, to excel others in performance. This involves competition with a particular standard of excellence of performance. Achievement motivation is thus a learned motive to compete and to strive for success. Success becomes a goal, which must be achieved in one way or the other.

COGNITIVE STYLE

The concept of "Cognitive Style" has been introduced into psychological literature over a period of time that extends back to the German Psychologists at the turn of the century.

Psychologists' interest in styles in cognition emerged partially because research on abilities and intelligence failed to reflect and interpret the processes generating individual differences. A small group of experimental psychologists in the 1950 and 1960 searched for new concept to explore and describe individual differences in cognitive functioning and developed stylistic constructs.

Page, G.T. and Thomas, J.B. (1978) in International Dictionary of Education considered cognitive style as an Individual's preferred or habitual style of learning or thinking. It is logical approach rather than a process of trial and error.

Husen, T. and Postlethwaite, T.N. (1985) in the International Encyclopedia of Education consider cognitive style as the term used to describe different ways in which people process information, including perception, storage, transformation and utilization of information from the environment. It
describes habitual process of perceiving and thinking which are qualitatively distinct.

Corsini, R.J. (1994) discussed the term cognitive style in relation to behaviour and preference. It is value-free, having no good or bad judgements. Cognitive style is confirmed with qualitative rather than quantitative differences of the dimensions.

Kazdin, A.E. (2000) in Encyclopedia of Psychology has added that cognitive style refers to the characteristics, self-consistent models of functioning, which individuals show in their perceptual and intellectual activities.

Parameswaran, E.G. and Sharadha, G.N. (2003) stated that cognitive style is also thought to be associated with personality, affective and motivational characteristics. Like ability, however, it is considered to be relatively stable, being consistent across both time and task (Schwen, T.M.; Bednor, A.K. and Hodson, K.; 1979).

Cognitive style attempts to understand individual differences in these processes, which might account for the wide variation in outcome among children and adults ostensibly faced with the same task or demands. There is no universally agreed definition of cognitive style but most researches have emphasized three features:

1. Styles are intellectual characteristics of individuals;
2. They describe processes which are relatively stable over time; and
3. Intra individual stabilities are consistent across tasks having similar requirements.

ACHIEVEMENT

Achievement refers to pupil’s knowledge, attainment and skill developed in the school subjects which are assessed by the authorities with the help of achievement test, in the form of examination and generally indicated by the test-scores or by marks assigned by the teacher or both.
Trow, W.C. (1960) defines achievement as, "the attained ability, degree of competence in school tests, usually measured by standardized tests and expressed in terms of age or grade units based on norms derived from a wide sampling of pupil's performance".

According to Travers, R.M.W. (1973) the term achievement refers to any desirable learning that occurs, whether it is considered as desirable or not. Hence any behaviour that is learned may come within a definition of achievement.

Kohli, T.K. (1975) has defined academic achievement as the level of proficiency attained in academic work or as formally acquired knowledge in school subjects which is often represented by percentage of marks obtained by students in examination.

So, academic achievement refers to the degree or level of success or that of proficiency attained in some specific area concerning scholastic or academic work. In general, it refers to the scores obtained in the annual examination. It is measured and assessed by the achievement test and compared to the set norms to evaluate individual performance.

RETENTION

English, H.B. and English, A.C. (1959) defined retention as persistence of after-effects of experiencing which are implied in learning and memory; the fact that an organism continues to perform a certain learned act after an interval in which the performance has not taken place; or the degree to which parts of a complex performance can be manifested after an interval.

The word retention suggests a static holding-on. Although the definition is very broad, any attempt to restrict its meaning or to distinguish different basic kinds of retention implies controversy. Decrease in retention is 'forgetting'; increase in retention is 'reminiscence'. Learning is measured after a very brief interval, retention after somewhat longer one but the measuring of operations is essentially the same. In learning, emphasis is upon the conditions for establishing a certain result; in retention, it is upon maintenance of that result.
6.2 SIGNIFICANCE OF THE STUDY

Language learning involves the establishment of the link between the language forms and their meanings. Knowing a language means the learner acquiring grammatical competence, communicative competence and proficiency in spoken language. The teaching of grammar has been playing a central role in language teaching. Singh, V.D. (1984) observed that most of the high school teachers favoured a normal teaching of grammar for speaking and writing grammatically correct English.

Every language has its grammar and the grammar of language is important because acceptability and intelligibility both in speech and writing depend on the currently followed basic notions and norms of grammar. A knowledge of grammar is perhaps more important to a second-language learner than to a native speaker. It is, therefore, necessary for us, to whom English is a second-language, to learn the grammar of the language (Verghese, C.P.; 1989; Pahuja, N.P.; 1995).

So keeping in view the importance of English grammar in learning English language among school students, the investigator selected the study which aimed not only preparing improvised instructional material for English teaching in the form of self-learning modules but also determining the efficacy of the different approaches of teaching English grammar including modular strategy as a method of teaching English grammar.

In the past, attempts have been made to find out the effectiveness of modular approach and relationship with its correlates at different levels.

reported relationship of modular approach with students’ reaction and study habits.

A critical review of the literature in the field of modular approach of teaching reveals that none of the scholar has tried to determine the relationship of modular approach with cognitive style and achievement motivation.


From the review of studies, it may be concluded that modules were developed in different subjects and were found to be effective as compared to other teaching methods and programmes. Out of these studies, only one study was related to the area of teaching English Grammar and module was prepared on one unit “Concept of Tense” in English Grammar.

English Grammar is an important component for the learning of English language. In the school, students do not have mastery over the basic elements of English Grammar and commit several mistakes in writing as well as in speaking. Most of the English language teachers use conventional method of teaching grammar at secondary stage. Teachers neither frame objectives to be achieved nor prepare criterion tests to test the achievement of objectives. Looking to the importance of the subject and the lack of research work in this area, the investigator got motivated to study teaching English through modular strategy at secondary stage and its effects on achievement and retention of students in relation to achievement motivation and cognitive style.
6.3 STATEMENT OF THE PROBLEM

"EFFICACY OF MODULAR INSTRUCTIONAL STRATEGY OF TEACHING ENGLISH IN RELATION TO ACHIEVEMENT MOTIVATION AND COGNITIVE STYLE OF SECONDARY SCHOOL STUDENTS."

6.4 OBJECTIVES OF THE STUDY

The study was conducted to achieve the following objectives:

1. To design and develop instructional modules on selected grammatical units for teaching English.

2. To prepare criterion referenced achievement test on the selected grammatical units of English to measure the achievement and retention of students.

3. To study the differential efficacy of three instructional strategies i.e. self-learning module; learning module through the teacher intervention and conventional method on the achievement and retention of students.

4. To examine the effect of achievement motivation of students on the achievement and retention in English Grammar irrespective of strategy of teaching.

5. To study the effect of cognitive style of students on the achievement and retention of English Grammar.

6. To see whether the variables of achievement motivation and cognitive style of students interact with modular strategies and non-modular learning or not.

7. To study the effect of interaction of instructional strategies with achievement motivation, instructional strategies with cognitive style and achievement motivation and cognitive style on achievement and retention in English Grammar.

8. To study the reaction of students to particular strategy out of two modular strategies of learning grammar.
6.5 HYPOTHESES OF THE STUDY

Research Hypotheses

1. (a) There will be significant difference in the mean achievement of groups exposed to different strategies of instruction in English Grammar.

   (b) The groups taught through different instructional strategies will differ in retention of grammatical concepts.

2. (a) The variable of achievement motivation significantly contributes towards the achievement of English Grammar irrespective of strategy of teaching.

   (b) The variable of achievement motivation significantly contributes towards the retention of English Grammar irrespective of strategy of teaching.

3. (a) Cognitive style of the students will not affect significantly the achievement of English Grammar.

   (b) Cognitive style of the students will not affect significantly the retention of English Grammar.

Interactional Hypotheses

First Order Interaction

4. (a) There will be significant interaction between instructional strategies and levels of achievement motivation in terms of students acquisition of English Grammar.

   (b) There will be significant interaction between instructional strategies and levels of achievement motivation in terms of students retention of English Grammar.

5. (a) Interaction of teaching strategies and cognitive style will not contribute significantly in the achievement of students in English Grammar.

   (b) Interaction of teaching strategies and cognitive style will not contribute significantly in the retention of English Grammar.
6. (a) There will be no significant interaction between achievement motivation and cognitive style in terms of students acquisition of English Grammar.

(b) There will be no significant interaction between achievement motivation and cognitive style in terms of students retention of English Grammar.

**Second Order Interaction**

7. (a) There will not be any significant interaction among instructional strategies, achievement motivation and cognitive style in terms of students acquisition of English Grammar.

(b) Second order interaction among instructional strategies, achievement motivation and cognitive style will contribute significant variance in terms of student retention of English Grammar.

8. There will be significant difference in the reaction of student to particular strategy out of two modular strategies of learning Grammar.

### 6.6 DELIMITATIONS OF STUDY

1. The study was limited to try out only two modular strategies involving self-learning module and learning module with teacher intervention.

2. The study was confined to IX class students only.

3. The study was limited to a sample of 300 students selected from two schools of Chandigarh (UT) only.

4. It is not possible to develop modules on all the units of English Grammar prescribed by the CBSE for class IX; the investigator, therefore, has selected only 4 units for developing the modules.

5. The effects of self-learning modular strategy and learning module with teacher intervention were studied in relation to achievement motivation and cognitive style only.

6. The investigation of teaching was conducted in respect of only two cognitive styles namely, field-dependent and field-independent.
6.7 DESIGN OF THE STUDY

The present research was designed to compare the effects of two modular strategies and conventional method on students achievement and retention of English Grammar at secondary stage in relation to achievement motivation and cognitive style. To study the teaching of English Grammar, the instructional strategies involved preparation of self-instructional material viz., two types of modular strategies for teaching of English language to 9th class students. For the purpose of investigation, experimental method was employed in the form of pre-test and post-test factorial design by involving three groups - two experimental groups and one control group.

Group I (Experimental group I) was presented with self-learning modules; Group II (Experimental group II) learning modules with teacher intervention and group III (control group) for learning English through conventional method. In order to analyze the data, three way (3X3X2) analysis of variance was used for three independent variables:

(A) Instructional treatment as self-learning modules, Learning modules with teacher intervention and conventional method of teaching

(B) Achievement Motivation

(C) Cognitive Style

The variable of teaching strategies was studied at three levels, viz. self-learning modules, learning modules with teacher intervention and conventional method of teaching. The variable of achievement motivation was studied at three levels, namely high, average and low achievement motivation. The variable of cognitive style was studied at two levels, i.e. field-dependent and field-independent.

In this study, the instructional strategies remained the treatment variable. Achievement motivation and cognitive style were used as classifying variables and achievement and retention in English Grammar acted as dependent variable.
The dependent variable, i.e. achievement was calculated by administering the standardized achievement test in English Grammar after the students were exposed to three different strategies of instruction and retention was found by administering the achievement test for each treatment after an interval of three weeks.

Pictorial presentation of the design for the present study has been given below:

**Table 6.1**

**The Schematic Layout 3 X 3 X 2 Factorial Design**

<table>
<thead>
<tr>
<th>Performance Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group (I)</td>
</tr>
<tr>
<td>A1</td>
</tr>
<tr>
<td>High</td>
</tr>
<tr>
<td>F-D</td>
</tr>
<tr>
<td>C1</td>
</tr>
</tbody>
</table>

**Where:**

A1 stands for Group Exposed through Self-learning Modules.
A2 stands for Learning Modules with Teacher Intervention.
A3 stands for Conventional Method of Teaching.
B1 stands for High Achievement Motivation.
B2 stands for Average Achievement Motivation.
B3 stands for Low Achievement Motivation.
C1 stands for Field-Dependent
C2 stands for Field-Independent.
From the Table 6.1, it can be derived that the treatment variable of instructional strategies was given code A, achievement motivation was given code B and cognitive style was given code C.

6.8 SAMPLE OF THE STUDY

The study was conducted on a sample of 300 students of 9th class, both boys and girls, drawn from two Government Model Senior Secondary Schools situated in the urban areas of Chandigarh (U.T.) Purposive random sampling technique was used for the selection of the sample. The two schools were selected from the total schools of Chandigarh having at least three sections. In each school out of three intact groups (50-55 students in each section) two experimental groups were exposed to modules with and without teacher intervention and third group acting as control group was taught in the conventional way.

Another sample of 160 students was raised from two schools of Govt. Model Senior Secondary School, Sector 20, Chandigarh and Govt. Model Senior Secondary School, Sector 46, Chandigarh for standardization of Achievement Test and Reaction Scale.

A sample of 150 students was raised from Govt. Model Senior Secondary School, Sector 10, Chandigarh to find out the reliability of the achievement test and reaction scale. Apart from this, 18 experts were selected for finding the validity of the achievement test and 15 experts for finding the validity of the reaction scale.

6.9 TOOLS USED

In the present study, following tools were used to collect the relevant data:

1. Self-Learning Modules in English grammar were developed by the investigator on four Topics of ninth class, namely, The Modals, The Passive, The Reported Speech and The Prepositions out of the eight topics prescribed by the C.B.S.E.
2. An Achievement Test on the same units of English grammar developed and standardized by the investigator was used to test the performance of the learner before and after the treatment.

3. Achievement Motivation Scale constructed and standardized by Deo, P. and Mohan, A. (1985) and published by National Psychological Corporation, Agra, was used to classify students into various levels of achievement motivation.

4. The Group Embedded Figure Test (GEFT) by Philip, K. Ottman, Evelyn Raskin and Herman, A. Witkin (1971) was used to identify the cognitive style of the students.

5. The retention was measured by administering an achievement test after three weeks.

6. Module Reaction Scale to know students' reaction towards the modular strategy was prepared by the investigator.

6.10 PROCEDURE OF THE STUDY

After the selection of the sample, the experiment was conducted in five phases.

Phase I:

Achievement Motivation Scale and Group Embedded Figure Test were administered in each school in order to identify the level of Achievement Motivation and cognitive styles of students.

Phase II:

A pre-test was administered to the students of the treatment groups and control group to know information regarding the previous knowledge of the students.

Phase III:

The students were given three treatments on the basis of three instructional strategies in the respective groups.
Group I was exposed through self-learning modules.
Group II was exposed through learning modules with teacher intervention.
Group III was taught through conventional method by the investigator herself.

The teaching was carried out for a period of 4 weeks (5 periods/week).

Phase IV:

At the end of the treatment, all the three groups were tested by administering achievement test as post-test. The two experimental groups were administered the Reaction Scale to know students reaction towards the modular strategy.

Phase V:

After 3-weeks, again same achievement test was administered to the students of two treatment groups and control group to get a measure of their retention. The answer sheets were scored with the help of scoring key. The time limit for test was 40 minutes.

6.11 SCORING OF TEST

The tests were scored strictly in accordance with the instructions given in the respective manuals. The data yielded the following set of scores:

1) Pre-test (Achievement Test) Scores
2) Achievement Motivation Scores
3) Cognitive Styles Scores
4) Post-test (Achievement Test) Scores
5) Retention Scores
6) Reaction towards Module Scores

6.12 STATISTICAL TECHNIQUES USED

Descriptive statistics such as mean, median, mode, standard deviation were worked out to study the general nature of the sample in relation to
dependent variable, i.e. achievement and retention and independent variables, viz., instructional treatments as self-learning module, learning module with teacher intervention and conventional method; achievement motivation and cognitive style.

Skewness, kurtosis and their standard error were worked out to see the trend of departure of the sample distribution from the normal probability curve.

Analysis of variance (ANOVA) was used to test the hypotheses related to strategies of teaching, for achievement test scores and retention test scores, achievement motivation and cognitive styles.

t-test was applied to find out the significance of difference between means related to different groups and different variables.

6.13 FINDINGS AND CONCLUSIONS

1. Three instructional strategies - self-learning module, learning module with teacher intervention and conventional method of classroom teaching produced significant variation among the mean achievement scores and retention scores of the learners of three groups. Thus, the achievement and retention of students are affected by the different instructional strategies adopted by the teacher.

2. Students using learning module with teacher intervention achieved and retained more concepts of English grammar than students exposed to self-learning modular strategy and conventional method.

3. The students having different levels of achievement motivation produce differences in the achievement and retention of grammatical concept in English irrespective of the facts that they are exposed to any strategies of instruction.

4. High achievement motivation group scored higher mean scores and is considered superior to the acquisition and retention of grammatical concepts in English than average or low achievement motivation groups.
5. Cognitive style of students does account for difference in the achievement and retention of the learners of three groups in English grammar.

6. Field-independent group scored higher mean scores and is considered superior in the acquisition and retention of grammatical concepts in English than field-dependent group of learners of all the three groups.

7. The interaction between instructional strategies and different levels of achievement motivation was found to be significant to produce differential achievement and retention scores.

8. Students with high achievement motivation are higher on achievement than the students with average achievement motivation and low achievement motivation in modular as well as non-modular strategies of instruction.

Whereas students with high achievement motivation are higher on retention than the students with average achievement motivation and low achievement motivation in modular strategies of instruction; but different levels of achievement motivation acted as redundant factor towards retention scores in conventional method of teaching.

9. Students with high achievement motivation attained and retained more grammatical concept of English when taught by learning module with teacher intervention as compared to self-learning modular strategy and conventional method.

10. Students with average achievement motivation differ on account of achievement as the students taught by learning module with teacher intervention achieve higher than self-learning modular strategy; whereas, self-learning modular strategy was found equal to conventional method of class-room teaching.

Average achievement motivation groups differ significantly when exposed to different modular as well as non-modular strategies of instruction. However, the students taught by learning module with teacher
intervention retained higher scores than self-learning modular strategy followed by conventional method.

11. Low achievement motivation groups differ significantly when exposed to different modular as well as non-modular strategies of Instruction. However, the students with learning module with teacher intervention attained higher scores than conventional method. Students with low achievement motivation differ on account of retention as the students taught by learning module with teacher intervention retained higher than self-learning modular strategy; whereas, self-learning modular strategy was found similar to conventional method of classroom teaching.

12. The interaction between instructional strategies and different types of cognitive styles do not produce significant variation in the achievement and retention of concepts in English grammar.

13. The interaction between levels of achievement motivation and types of cognitive style does account for differences in the achievement and retention of grammatical concepts of English.

14. The students having average achievement motivation with field-independent cognitive style were found to perform better than average achievement motivation with field-dependent in the acquisition and retention of English grammar; whereas high achievement motivation and low achievement motivation groups with field-dependent and field-independent cognitive style do not differ in respect of achievement and retention of English grammar.

15. The students having high achievement motivation with field-dependent cognitive style group were found to attain and retain more concepts of English grammar than average achievement motivation-field dependent and low achievement motivation-field dependent group. However, average achievement motivation with field-dependent and low
achievement motivation with field-dependent groups were found to be similar in their achievement and retention scores.

16. The three different groups of high, average and low achievement motivation having field-independent cognitive style differ from one another. Groups having high achievement motivation with field-independent cognitive style were found superior to average achievement motivation with field-independent followed by low achievement motivation with field-independent group of learners in the achievement and retention of English grammar.

17. Instructional strategies, achievement motivation and cognitive style did interact significantly to produce variation in the achievement and retention of the students.

18. Students having high achievement motivation-field dependent differ on achievement when exposed to three different strategies of instruction. High achievement motivation-field dependent students exposed to learning module with teacher intervention were superior than self-learning modular strategy followed by conventional method; whereas there existed no difference in retention scores of students among different groups when exposed to three strategies of instruction. High achievement motivation-field independent groups differ on account of achievement when taught by self-learning modular strategy and conventional method; whereas high achievement motivation-field independent group taught by learning module with teacher intervention differ from self-learning modular strategy and conventional method on retention scores, but there existed no difference between self-learning modular strategy and conventional method.

19. Students having average achievement motivation-field dependent and average achievement motivation-field independent cognitive style differ on account of achievement when exposed to self-learning modular strategy and learning module with teacher intervention, learning module with
teacher intervention and conventional method with superiority of learning module with teacher intervention strategy; but there existed no difference between the groups exposed to self-learning modular strategy and conventional method.

Whereas students with average achievement motivation-field dependent when exposed to self-learning modular strategy, scored higher mean scores than learning module with teacher intervention; and average achievement motivation-field independent groups differ when exposed to three different strategies of instruction with superiority of learning module with teacher intervention than conventional method and self-learning modular strategy as far as retention scores are concerned.

20. Low achievement motivation-field dependent and low achievement motivation-field independent students differ when exposed to self-learning modular strategy and learning module with teacher intervention; learning module with teacher intervention and conventional method on account of achievement indicating higher achievement scores when taught by learning module with teacher intervention than conventional method and self-learning modular strategy; but low achievement motivation-field dependent and low achievement motivation-field independent students were found almost similar when exposed to self-learning modular strategy and conventional method.

Whereas there existed no difference between the low achievement motivation-field dependent and low achievement motivation-field independent groups when exposed to three different strategies of instruction except the low achievement motivation-field independent groups differ when exposed to learning module with teacher intervention and conventional method indicating superiority of learning module with teacher intervention on retention scores.

21. Learning module with teacher intervention was found more effective than self-learning module in terms of students' reaction towards it.
6.14 EDUCATIONAL IMPLICATIONS OF THE PRESENT STUDY

The findings of the present study have some very important implications for improving the quality as well as quantity of achievement and retention in grammatical concepts of English.

English teachers should employ learning module with teacher intervention instructional strategy to enhance the attainment of the students at the secondary school level. Under this strategy, students would achieve and retain more than the students taught through self-learning modular strategy alone or conventional method of classroom teaching as it has been concluded by the present study. Learning module with teacher intervention combines the advantages of both the systems. As this strategy is individual based and learner paced; the instruction is assisted by teachers and enriching explanation before proceedings to final attainment. The use of learning-module with the help of teacher in time of need can be more profitably used by the teacher. Self-learning module alone without the intervention of teacher may not prove significant in the attainment or the performance of the learner.

This instructional strategy not only helps in developing thinking ability of the students but also the course could be completed in comparatively less time than the self-learning modular strategy or conventional method of teaching and spare time can be utilized for more enriched educational activities.

This study will help the English teacher to classify the students in various groups having different levels of achievement motivation and teach them accordingly in order to raise their academic achievement and retention.

Cognitive style does effect the achievement and retention of students in learning grammatical concepts. Field-dependent students may be compensated by enriching educational activities and teaching through learning module with teacher intervention strategy.
6.15 SUGGESTIONS FOR FURTHER STUDY

Following are some of the most glaring suggestions, which can be undertaken on the lines of the present research work:

1. A study may be carried out to compare the relative effectiveness of self-learning module, learning module with teacher intervention and conventional method in different disciplines in relation to the variables of the present study.

2. The study may be conducted by involving more variables like emotional intelligence, personality types and creativity at different age groups.

3. The present study may be replicated by involving more topics or the entire course of English.

4. The present study may be conducted at the college level or university level in different subjects to find out the effectiveness of different instructional strategies at higher grade level.

5. Modular instructional strategies can be used along with other strategies in other school subjects.

6. The effect of modular instructional strategies on teacher training in schools may be another area of study.