CHAPTER V

SUMMARY AND CONCLUSION

5.1 INTRODUCTION

One of the basic attempts in research is to summarise the findings, discussion, explain the educational implications of the study, recommendations, and suggestions for further research and arrive at some conclusions.

The analysis and interpretation of data is not enough to fulfil the criteria for research work. The analysis and interpretation of data should be converted into findings. On the basis of important findings, discussion, implications of the study, recommendations, suggestions for further research and conclusion are drawn out.

In this chapter, the objectives of the study, hypotheses of the study and collection of data are also presented in brief. This chapter contains findings, discussion, implications of the study, recommendations, suggestions for further research and conclusion.

English Language teaching methods have changed significantly. New methods have emerged for helping students develop proficiency in English as a second language. Now that classroom atmosphere has changed from a teacher-centered environment to one that is more learner and activity-centered where teachers and students are partners in the learning experience.
Language learning is now seen as an active endeavour in which the learner plays a significant role, generating the language he or she is learning and altering the learning process in individualized and culturally determined ways.

Thus the role of the learner has changed from that of a passive recipient of knowledge about the language he or she is learning and from an automatic applier of rigid language rules to an active decision maker in the language learning process and a creative generator of newly acquired language.

Today we have reached the stage where changes occur so rapidly and the language teacher has to keep pace with the most recent technologies if he or she wants not only to interest his or her students in the learning process but to help them overcome anxiety, frustration which makes the learner stagnate and consequently unable to move to a higher level. The advent of new technologies in learning process is always exciting. They add new dimensions to the class and spark students to higher level of motivation and achievement.

Language learning and computers are closely related with each other. The sensible integration of both can enable students to organize and process their knowledge at the touch of keyboard button. This innovative approach to language learning, a variation from the conventional classroom-based instruction, will definitely yield exciting results in language teaching. During the last decades, a wide variety of teaching aids have been placed at the disposal of language teachers. Charts, slides, tape-recorders, videos, overhead projectors and many other technological innovations have taken the place of traditional chalk and board, though not completely. Computers are the latest among the aids used for instructional purposes.
Computers offer great potential for language learning apart from being powerful and stimulating aids.

With revolutionized language teaching methodology after the invasion of electronic media in the classrooms, computers now have become very effective tools in teaching grammar, vocabulary, syntax, and comprehension and even in developing interactive communication skills and in creating writing activities.

The nature and direction of changes taking place around the world and more preciously within the educational system reinforce the need for a new approach based on the recent technology of the country. One such approach is CALL which describes the use of the computer as part of a language course.

Grammar occupies an important place in the teaching learning of a language. It has a utilitarian value for a student. It is a means to the learning of a language efficiently and correctly. Thus the knowledge of the grammar acquired will be of great help. In the recent past, language teaching was mostly grammar centered. The common practice was grammar first, language next. Thus the learner of the language had to memorize the rules of grammar along with the exceptions. In this process, the learner often found himself confused.

Teaching of grammar in the traditional method kills the interest and initiative of the language learner. In the traditional grammar classes the lesson starts with a sudden grammatical presentation taught with rules. Thus the learner of the language had to memorize the rules of grammar along with the exceptions. In this process the learner often found himself confused. The language learners were unwilling to
participate, since the type of input of grammar learning is not persuasive and influential for recalling for further learning. In the traditional grammar classroom, there is lack of fun factor, unavailability of extra help, lack of immediate feedback out of the class, adds more complexity to grammar learning process. The use of chalkboard as a means of grammar presentation is also old fashioned.

Younger pupils are more interested in objects and actions. Grammar is the machinery by which the vehicle of language is set in motion. It should help the pupil to speak with interest. It should be taught without making it unpopular with the learner. Demonstrations with the aid of pictures and objects in the class prove more effective and kindle the interest of the pupils. Adding more movements and colours for manifesting the grammar tips in the classes can flourish the dynamic nature of grammar.

Learning is modification of behaviour. This behavioral modification arising out of learning may be due to changes in cognitive, affective, sensory-motor or a combination of all these in different proportions. The basic learning experiences have to be through the senses of the individual. The natural way of learning by children is mainly through the use of senses. The sense of sight provides rich experience to the individual. Impressions created by the sense of sight cannot be erased. The teacher must use innovative teaching technologies that appeals to different senses.
5.2 NEED FOR THE PRESENT STUDY:

The computers have brought a revolution in education. It has unique combination of tutorial, interactive and visual capabilities which has a beneficial effect on the learner. It provides new possibilities of learning, thinking and growing emotionally and cognitively. Direct exposure to experience through the use of computers will give enough and exact information of the content taught. Because of the novelty, computers transform the dullest task into an adventure thus motivating learners to learn the language with interest.

Grammar instruction is often regarded as an unattractive component of the language by the language learners. One of the best solutions to change the unattractiveness into attractiveness is by creating a language tool that acts as stimuli for language learning. Adding more movements and colours for manifesting the grammar tips in the class can flourish the dynamic nature of grammar. It is the inborn nature of the children that they like colours, sounds and motions.

A judicious application of technology makes learning environment more interesting and more attentive. Particularly teaching of grammar requires computer application with multimedia in order to maintain a good learning environment. It allows the teacher to structure and present the information with varying special effects to the students. The application of CALL programme would definitely create a good learning environment in classroom, sustaining attention and motivating the students to learn effectively.
CALL programme for teaching English grammar is more beneficial and helpful than using the traditional methods. The application of CALL programme would definitely create a good learning environment and motivate the students to learn effectively and create a feeling that they are valued members of a learning community and positive self concept makes them feel capable and competent.

Hence, the researcher has chosen the topic for the present study to foster involvement in new teaching approaches to create a joyful learning environment for effective learning and to stimulate active information processing for effective learning.

**STATEMENT OF THE PROBLEM:**

Education is considered as the first step for every human activity in the present era of technological revolution after globalization. Every learner is an individual with different needs and skills of learning a language. Traditional methods of teaching a language placed the learners as passive recipients of the knowledge while teacher in the role of a transmitter of knowledge. With the advent of the communicative method of language teaching, the focus in the classroom shifted from the teacher to the learner. Current trends in the field of English Language Teaching focus on learner autonomy, learner involvement, learner-generated syllabi, creation of relaxed atmosphere for learning the language, and as a result, the concept of individualized instruction is increasingly gaining importance.

In the light of the information revolution due to technological innovation, there is a sweeping trend for using computers in all aspects of life in the present
scientific challenges of the 21st century. Further, the world is heading towards knowledge economy and a lot of money is invested in computer assisted language learning instructional software programs.

In a country like India, it can be observed that students most often memorize information and tend to learn the language without interaction with the required material. Further, they lack the motivation for learning the language as they are tired of traditional method of teaching and variations in the method of teaching from one teacher to another teacher. To overcome this problem the researcher aims at using a CALL programme and investigate its' impact on students’ achievement in learning English grammar. Therefore, the present study aims to find out the “Impact of CALL in learning English grammar among the high school students”.

5.3 OBJECTIVES OF THE STUDY:

The objectives framed for this study are:

1. To develop an interactive CALL Programme for learning English Tenses for High School Students.

2. To find out the impact of Computer Assisted Language Learning (CALL) in enhancing the English grammar ability among High School students.

3. To study the attitude, academic motivation and self-concept towards English among High School Students.
4. To find out the relationship among the variables: attitude, academic motivation, self concept and academic achievement towards English among the High school students.

**HYPOTHESES OF THE STUDY:**

For the present research work, the following hypotheses are framed to set the research in the right perspective.

1. There is no significant difference between the Government school and Private school students in their attitude towards English.

2. There is no significant difference between the Government school and Private school students in their motivation towards English.

3. There is no significant difference between the Government school and Private school students in their Self-Concept towards English.

4. There is no significant difference between the Boys and Girls students in their attitude towards English.

5. There is no significant difference between the Boys and Girls students in their motivation towards English.

6. There is no significant difference between the Boys and Girls students in their self-concept towards English.

7. There is no significant difference between the control group and experimental group students in their attitude towards English.
8. There is no significant difference between the control group and experimental group students in their motivation towards English.

9. There is no significant difference between the control group and experimental group students in their self-concept towards English.

10. There is no significant difference between the control group and experimental group students in their achievement in English grammar in the pre-test.

11. There is no significant difference between the pre-test and post-test mean scores of control group students in their achievement in English grammar.

12. There is no significant difference between the pre-test and post-test mean scores of Experimental group students in their achievement in English grammar.

13. There is no significant difference between the control group and experimental group students in their achievement in English grammar in the post-test.

14. There is no significant relationship among the variables, attitude, academic motivation, self-concept and academic achievement in learning English grammar among high school students.

5.6 ASSUMPTIONS OF THE STUDY:

The following are the assumptions of the study:

1. CALL programme has an impact on the academic achievement of learners of all categories.
2. It is possible to develop a CALL programme for English grammar for high school students.

3. The developed CALL programme could be administered and the impact of CALL programme could be studied.

4. The CALL programme could hold the attention of students.

5. The CALL programme may accelerate the understanding ability of the students.

6. The CALL programme may motivate the students to involve in teaching – learning process effectively.

7. The CALL programme can promote a positive self-image in the learner.

5.7 DELIMITATIONS OF THE STUDY:

1. The investigation is confined only to the ninth standard students in the Karaikal district in the Union Territory of Puducherry.

2. The investigator adopted control group and experimental group design.

3. This study used CALL programme for teaching only English tenses.

4. The study was conducted for 15 weeks

5. The present study is confined to find out the impact of CALL programme on the academic achievement among the high school students.
5.8 THE SCOPE OF THE STUDY:

The present study aims at ascertaining the impact of CALL programme in learning English grammar among high school students to enable them to understand tenses very easily through individualized instructional technique. The CALL programme may reduce the monotony in the classroom by bringing out real life situations and motivate them for self-study and provides opportunities for individual pace and ability.

The study intends to develop a CALL Programme for teaching English tenses for high school students and find out the impact of the CALL programme through experimentation in learning English tenses. The study provides scope for the development and use of many CALL programmes in the concerned disciplines well as other disciplines for the benefit of learners of different categories. Hence the CALL programme can be used as an individualized instructional technique for the students of different categories in English subject as well as other subjects.

5.9 RESEARCH DESIGN OF THE STUDY

The present study seeks to measure the impact of CALL in learning English grammar among the high school students with special reference to tenses. The experimental method is used for this study.

According to Best, John W. (1997), experimental design is the blueprint of the procedures that enable the researcher to test hypothesis by reaching valid conclusions about relationships between independent and dependent variables. In the present study the investigator has followed the experimental group design.
5.10 TOOLS USED FOR THE STUDY

1. CALL programme for teaching English grammar developed by the investigator.

2. Academic Achievement test in English tenses (Developed by the investigator)

3. Attitude scale towards English (Developed by the investigator)

4. Academic Motivation scale (Developed by the investigator)

5. Self concept scale (Developed by the investigator)

5.11 DATA COLLECTION PROCEDURE

The investigator collected data from the students of the sample institutions. It consisted of administration of pre test, implementation of CALL programme, administration of tests for Attitude towards English, Academic Motivation towards English and Self Concept towards English and administration of Post Test for control group and experimental group. The students were given instructions to respond to the statements for Attitude, Motivation, Self concept and Academic Achievement. The investigator checked all the statements after they had been filled in to see if any blanks had been left out for it was essential that all statements were answered and the scale was complete in all respects.

Finally the analysis was done in order to find out the impact of CALL under two different teaching learning environments.

The investigator consulted the experienced teachers who handle English subject in the government and private high schools in order to finalize the duration of
the treatment. On the basis of the suggestions of the above experts the control group students of each school were taught for 2 periods a day for 5 days through traditional method and the experimental group students were divided according to the availability of computers and taught for 2 periods a day for 5 days in total, the duration of the treatment was finalized for 10 periods for traditional teaching and 10 periods for CALL method of teaching for each group of students.

5.12 STATISTICAL TECHNIQUES USED FOR DATA ANALYSIS

In the present study, the relevant data obtained from the assessment scores of 325 students on the pre-test, post-test on achievement in English tenses, implementation of CALL Programme, administration of Post test, and administration of Attitude towards English test, administration of Academic Motivation test towards English, administration of Self-Concept test towards English have been analyzed.

5.12.1 RELIABILITY/ITEM ANALYSIS

The reliability of the scale items measuring attitude, academic motivation and self-concept of the respondents is ascertained using Reliability / item analysis.

5.12.2 FACTOR ANALYSIS

The factor analysis based on the principle component method with varimax rotation is used to identify the dimensions underlying attitude, academic motivation and self-concept of the students. The factor analysis first produces eigenvalue, proportion of explained variance of underlying factors (underlying dimensions). Any factor extracted by the analysis is considered to be a valid factor if its eigenvalue is
above one based on the most commonly used criterion, which is known as Kaiser’s criterion. The factor loadings (each item’s correlation with valid factors) obtained from factor analysis are used for identifying actual characteristics of the underlying factors. Generally, an item belongs to one factor if its loading with that factor is 0.40 and above.

5.12.3 DESCRIPTIVE ANALYSIS

The descriptive analysis such as mean and standard deviation are used in the thesis to calculate the central tendency and dispersion of data used in the study. This descriptive analysis is used from the Respondents’ opinion about attitude, academic motivation and self-concept as well as academic achievement in English grammar before and after CALL method of teaching.

5.12.4 DIFFERENTIAL ANALYSIS

The degree of attitude, academic motivation and self-concept towards various facets of studying English language is evaluated based on the sample. Here an attempt is made to know whether there is any significant difference in the degree of attitude, academic motivation and self-concept towards English between control and experimental groups, between student groups in Government and private schools and between Boys and Girls. For this purpose, the mean opinion levels are compared across groups using t-test.
5.12.5 RELATIONAL ANALYSIS

Relational analysis aims at finding out the relationship among the variables: attitude, academic motivation, self-concept and academic achievement in learning English grammar among high school students. The Co-efficient of correlation was used to find out the relationship among the variables.

5.13 FINDINGS

1. The high school students have felt that learning English is an advantage, create ethical value, improve learning attitude, an important in the world and gives enjoyment to them.

2. The motivation through external regulation, identified regulation, introjected regulation and integrated regulation as well as overall academic motivation towards English is higher whereas the amotivation is found to be at moderate levels among high school students.

3. The self-effort, self-confidence and self-acceptance are higher while self-efficacy is moderate among high school students. The overall self-concept has also been at high extent among high school students.

4. CALL method has significant impact than traditional method in increasing the knowledge of English grammar among the high school students.

5. The knowledge gained in English grammar is higher for Government school students than that of private school students if teaching method was traditional.
6. The knowledge gained in English grammar is higher among private school students compared to that of Government school students under CALL method.

7. Experimental group students have improved well in their achievement in learning English grammar in the post test compared to control group students.

8. There is no significant difference between the Government school and Private school students in their attitude towards English. This shows that both the government school and private school students are same in their attitude towards English but private school students are higher than government school students in their ethical value and the government school students are higher than the private school students in their learning attitude.

9. There is significant difference between the Government school and Private school students in their motivation towards English. This shows that the government school students are higher than the private school students in their motivation towards English.

10. There is no significant difference between the Government school and Private school students in their self concept towards English. This shows that both the government school and private school students are same in their self-concept towards English but in their self effort, private school students are higher than the government school students. The government school students are higher than the private school students in the dimension of self acceptance.
11. There is significant difference between the Boys and Girls in their attitude towards English. This shows that both the boys and girls students differ in their attitude towards English. It is deduced that the extent of attitude shown towards English is significantly higher for girls students than for boys students in Karaikal district.

12. There is significant difference between the Boys and Girls in their motivation towards English. This shows that both the boys and girls differ in their motivation towards English. The girl students are found to have significantly higher level of academic motivation compared to that of boys but there is no significant difference in the dimensions of amotivation, external regulation, identified regulation and intrinsic motivation among boys and girls.

13. There is no significant difference between the Boys and Girls in their self-concept towards English. This shows that both the boys and girls students are same in their self-concept towards English but the girls are higher than the boys in the dimension of self effort of self concept.

14. There is no significant difference between the control group and experimental group students in their attitude towards English. This shows that both control group and experimental group students are same in their attitude towards English.

15. There is significant difference between the control group and experimental group students in their motivation towards English. This shows that both the control group and experimental group students differ in their motivation
towards English. The values are significant only in respect of dimension of identified regulation of motivation but all the other dimensions of motivation are not significantly different.

16. There is no significant difference between the control group and experimental group students in their self concept towards English. This shows that both the control group and experimental group students are same in their self-concept towards English but the experimental group students are higher in the dimensions of self effort and self efficacy.

17. There is no significant difference between the control group and experimental group students in their achievement in English Grammar in the Pre Test. This shows that both control and experimental group students have same level of achievement in English Grammar in the Pre Test.

18. There is significant difference between the pre and post test mean scores of control group students in their achievement in English grammar. This shows that the control group students have improved in their achievement in English Grammar in the Post Test.

19. There is significant difference between the pre and post test mean scores of experimental group students in their achievement in English grammar. This shows that the experimental group students have improved in their achievement in English Grammar in the Post Test.

20. There is significant difference between the control group and experimental group students in their achievement in English Grammar in the Post Test.
This shows that the experimental group students perform significantly better in English Grammar than that of the control group students in the post test.

21. There is significant relationship among the variables, attitude, academic motivation, self-concept and academic achievement in learning English grammar among high school students in Karaikal District.

5.14 DISCUSSION

Several studies have attempted to find out the impact of CALL programme in learning English grammar. The findings of Doughty (1991), Christopher (1995), Nagata (1996), Reddy et al. (1996), Shanmugasundaram and Stella (1996), Tajudeen (1997), Selvi (2002), Ambedkar (2004), Chenu et. Al (2007) Abdallah et. al. (2009), Al Abdel Halim (2009), Olibie (2010), Ruba and Nedal (2011), Jafarian, Soori and Kafiapour (2012) pointed out that the experimental group showed a better performance than the control group. The findings of the present study reveal that the experimental group students performed better in English Grammar after the treatment which shows the impact of CALL programme. The pre test achievement scores of the control group and experimental group students showed that the two groups did not differ significantly but the comparison of the post test scores of the control group and experimental group students showed that the experimental group students performed significantly better than that of the control group students in English grammar after the treatment which shows the superiority of the CALL programme.

The studies of Chapelle and Jamieson (1986), Smit (1996), Svara (2009) and McKenzie (2010) pointed out that the students who spent a lot of time using CALL
had a positive attitude towards English. The present study reveals that the students have a positive attitude towards learning English.

Unrau and Schlackman (2006), investigated the effects of intrinsic motivation and extrinsic motivation on reading achievement for urban middle school students. They reported that intrinsic motivation seemed to have positive effect on reading achievement whereas extrinsic motivation seemed to have negative impact on reading achievement. The findings of the present study reveal that the motivation through external regulation, identified regulation, introjected regulation and integrated regulation as well as overall academic motivation towards English is higher whereas amotivation is found to be at moderate level among high school students.

Mccoch and Siegle (2002), suggested that self-concept helps to predict academic achievement. They suggested that students who do not perform well academically have a low self-concept. This study reveals that the self-concept towards English among high school students comprises of four major facets, they are self-effort, self-confidence, self-acceptance and self-efficacy. The self-effort, self-confidence and self-acceptance are higher while self-efficacy is moderate among high school students. The overall self-concept has also been at high extent among the high school students.

Guay, Ratelle et al.(2010), tested the relationship among academic self-concept, autonomous academic motivation and academic achievement for 925 French-speaking adolescent students in Canada using longitudinal design. They tested the additive effect of both autonomous academic motivation and academic self-concept on academic achievement. The findings of the present study indicate that
there is significant relationship among the variables: attitude, academic motivation and self-concept among high school students.

### 5.15 EDUCATIONAL IMPLICATIONS OF THE STUDY

The present study reveals that the experimental group students who learnt through CALL programme performed significantly better than that of the control group students who learnt through traditional method of teaching implies that the CALL programme has tremendous impact in learning English grammar than the students learning through traditional method. This proves the impact of CALL programme in learning English grammar developed by the investigator.

The study reveals that the high school students have felt learning English is an advantage, create ethical value, improve learning attitude and an important language in the world and gives enjoyment to them.

The study reveals that overall academic motivation towards English is higher where as the amotivation is found to be at moderate levels among high school students.

The study reveals that the self-effort, self-confidence and self-acceptance are higher while self-efficacy is moderate among high school students. The overall self-concept has also been at high extent among high school students.

The study also reveals that both the boys and girls students differ in their attitude towards English. It is deduced that the extent of attitude shown towards English is significantly higher for girls than for boys in Karaikal district.
The study reveals that the achievement of the control and experimental group students in the post test is significantly higher than the pre test. But the performance of the experimental group students in the post test is more significantly higher than the post test performance of control group students. Thus, it proves the supremacy of the CALL programme over traditional method. Hence, it can be inferred that the CALL programme motivates the students to learn effectively and holds the attention by animated pictures and increases students’ understanding ability in learning English grammar. This proves the impact of the CALL programme in learning English grammar developed by the investigator.

In the present study it is found that there is significant relationship among the variables, attitude, academic motivation, self-concept and academic achievement in learning English grammar among high school students in Karaikal District.

5.16 SUGGESTIONS

Based on the outcomes from the interpretation, the following suggestions are provided.

1. The Government should take appropriate steps to implement computer based teaching method in addition to traditional method.

2. The implementation of technology based teaching method in Government schools should be on par with private schools because knowledge gained by students in private school from CALL method is significantly higher compared to that of those in Government schools.
3. The teachers should help in improving positive attitude, motivation and self-concept of the students toward subjects they teach in order to get high achievement in the subjects.

4. High school teachers should change their methods, techniques and ways of teaching, according to their students' needs and interests. Using CALL Programme more intensively and more frequently in the teaching-learning process would yield better results.

5. The present study reveals the impact of CALL programme in learning English grammar. It is suggested that more such CALL programme in the relevant as well as in the related subjects may be developed so as to enable the students achieve mastery over the other subjects according to their own pace and ability.

6. In teacher training institutes, training related to preparation of CALL programme in teaching of English grammar and the usage of them in the classrooms should be given to the student-teachers.

7. As the teachers working in schools have to cope up with the revolution in education, the schools should encourage and provide opportunities for teachers to develop such CALL programme in their respective disciplines.

8. It is recommended that the NCERT and department of education can organize training programme, workshops and seminars to train the teachers in developing such CALL programme so as to facilitate widespread use of CALL
programme by teachers and implement it as an ideal means of learning process.

5.17 SUGESTIONS FOR FURTHER RESEARCH

In order to extend the research findings of the study, a few suggestions are given below for further research.

In the present study English tenses from IX standard English syllabus has been selected for the development of CALL programme. The study can be extended by covering the entire grammar units in the syllabus.

The present investigation was carried out to find the impact of CALL programme in learning English grammar. It is suggested to conduct the study with other subjects like Physics, Chemistry, Mathematics etc.

It is suggested that the investigation may be extended to primary level where the children are in their critical stage of intellectual development. Further, it can be extended to secondary, graduate and post-graduate levels to find out the impact.

5.18 CONCLUSION

The present study attempted to analyse the impact of CALL in improving the English grammar skill among high school students. The present study has found that the CALL programme is very effective in learning English grammar among the high school students. Grammar instruction is an important means to help language learners to develop language. The colourful visualization of the grammatical concepts and immediate feedback which is one of the unique characteristics of CALL programme is
a powerful device for the language learners. Grammar instruction is often regarded as the unattractive component of the language by the language learners. One of the best solutions to change the unattractiveness to attractiveness is creating an attractive learning tool that acts as a stimuli for language learning.

Learning through CALL programme is more enjoyable and self-motivating. The individual student is motivated, attentive and active throughout the program. Adding more movements and colours for manifesting the grammar tips in the classes can flourish the dynamic nature of grammar. CALL programme takes great care of individualisation in instruction where the students learn at their own pace.

The role of the computers is becoming more appealing to teachers because of their huge capabilities and extensive effectiveness. Thus, the teachers in their classroom can also improve the performance of the students in learning English grammar by teaching through CALL programme. The computer which presents the teacher with a clear challenge and a unique opportunity for change should be a part and parcel of any teaching programme.