CHAPTER VI
VI. SUMMARY AND RECOMMENDATIONS

6.1. English Grammar Teaching:

As in the world where there are believers and non-believers of God, there are people who like English and who dislike it. But majority of the people have realised the importance of English consciously or unconsciously, knowingly or unknowingly. Once teaching English literature was equated with the teaching of the language. But, as time went on and with the advent of principles of language teaching, there occurred a change in teaching English language first and then the teaching of English literature. As a result many approaches and methods came into existence with their inherent merits and demerits. A knowledge of all these methods and approaches help a teacher of English to cull out the best in all these and arrive at a suitable eclectic approach for the benefit of his students.

English language teaching is further classified as teaching of prose, teaching of poetry, teaching of Grammar and teaching of composition. Generally speaking, students in rural areas have created a negative attitude towards the study of English because of the substandard teaching at the initial level. Particularly speaking, they have formed a dislike towards learning English Grammar.

6.2. Computers in Education:

The world is on the threshold of Twenty First Century. The passing century has been a period of rapid scientific advancement, which has made this world more comfortable and life in it more congenial. The advent of computers in the arena of science has relieved mankind of drudgery in various walks of life.
"Computers" have entered all the fields. Many fields have readily accepted their entry. But the field of education in India, is the last to accept computers into its domain. This is because of the traditional belief of the educationalist that electronic devices have no place in education. They are of the opinion that the machines and the human beings cannot interact with each other. But slowly this belief was shattered by the educational researches done abroad. While computers are at the peak in other fields they are gaining momentum in the field of education recently.

Group teaching has its background from Vedic ages. Experiments have shown that group teaching is a relatively unsuccessful methodology. From group teaching the trend has moved slowly towards individualised instruction.

Individualised instruction can be given through three different ways.

1) Book form  
2) Teaching machine  
3) Computer

The old book form is out dated because it has no control over the learner and there is no interaction between the teacher and the taught. But there can be interaction between the learner and the textual material through the use of interactive text as is case of self paced instructional text. Teaching machines have become obsolete because no one is willing to operate a mechanical device when its electronic counterpart is readily available.

Till recently group method of instructions has been the standard method in schools, colleges or in any educational setting. Only after Skinner’s introduction of programmed learning the world of education moved towards individualisation in instruction.
Some of Skinner's (1954) students and followers went to the extreme of saying that individual learning alone could be /should be the method of learning in schools. They argued that nothing could be taught but everything is to be learnt by the individual student.

This was the very strong opinion of Keller (1974), who at the age of 90 was waging almost a losing battle against the dogma of group instruction. Keller prepared Personalised System of Instruction and he proved that this personal/individualised system could maximise pupils learning. Taking the lead from Keller and others, the western schools and colleges are gradually switching over to individualised instruction.

In Modular Scheduling, Audio Lingual Packages, interaction video and so on are some of the innovations which assisted the process of individualisation, though overdue for a long time. This process of individualisation has been quickened by the introduction of computers. Already the utilisation of the computer has been maximised in all spheres of human activity like medical treatment, industries, agriculture, astrophysics, meteorology and so on. It is a sad affair that schools have not yet fully responded to the clarion call of computer buffs. Probably educationists are very conservatives and still they are not convinced of the efficacy of computers. They may be under the impression that computers are also like any other machine. One thing yet to be realised is that computers are the most intelligent, the most efficient machine that man has devised. So if education has not used other machines like projectors, televisions and
so on nothing would have been lost. But if computers are neglected the whole future of education will become bleak. And this researcher has taken up this issue to prove the efficacy of the computer in schools as compared to the conventional method of instruction. The educational process is moving from pedagogy to mathetics.

Today's modern world is entirely different from what it was a hundred years ago. In consequence, educational innovations are used to improve the standard of education both quantitatively and qualitatively. Technology has paved way for its advancement. The age-old teaching aids are slowly going out of the scene to give room for modern educational equipments. The urge is so great that no one can oppose the entry of computer in the field of education. It has already entered the teaching field of various science disciplines. Of late, linguists and language authorities have begun researches on the use of computer in language teaching. As a result, CALL (COMPUTER ASSISTED LANGUAGE LEARNING) has emerged and this is an offshoot of CAI (Computer Assisted Instruction).

6.3. Statement of the Problem:

The main objective of this research is to find out the effectiveness of CALL as a technique in teaching English Grammar to secondary level students in a rural area. The title of this study reads as follows:

Effectiveness of CALL Technique for Teaching Grammar at the Secondary Level.
6.4. Variables Selected:
The following are the variables selected for this study.

Dependent Variables: Achievement Scores
\- Attitude towards the Study of English

Independent Variables: Attitude towards Computers
\- Parental Encouragement
\- Interest in Foreign Languages

Intervening Variables: Intelligence
\- Study Habits

6.5. Development of the CALL software

The development of the CALL software used in this research study was made in different stages listed below. A particular unit (Affixation) in Grammar was taken for study taking into considerations the task analysis in terms of the stimuli required to be presented and flexibility of the available devices in the rural area where the research was conducted.

The unit taken was finalised for the study in consultation with language experts, educational scholars, programmers and senior teachers of English with rich experience at the secondary level and by fixing both the entry and terminal behaviour. The model selected was an extension of linear programme to run the software.
Each grammatical sub category was resolved into three main stages namely, Introductory, Teaching and Testing. Keeping in mind the vocabulary level of a Tamil medium student hailing from a rural area, a number of small steps were presented with ample examples at the Introductory and the Teaching stages. The package was developed in dBase III Plus. Instead of asking the sample to type the answers, the idea of pressing numbers for the alternative as (1), (2), (3) or (4) was taken as the learner found it difficult to locate the alphabetical keys.

Technical accuracy editing, Programming technique editing and composition editing were carried out before the software was ready for the try out.

The try out was carried both at the individual level and small group level. This helped the researcher to modify the software suitably.

Finally the software was validated by the exposure of the software to ten students and the criterion level of the learner's achievement was fixed as 75% of the sample scoring above 85% average.

The validated software does not require much knowledge about computer from the learner’s side to operate it. It is IBM PC/XT/AT compatible. The only additional hardware needed is the keyboard. The software is a user -friendly type and it runs on DOS Version-5.
6.6. Limitations of the Study:

1. The English language teaching deals with the teaching of Prose, Poetry, Grammar and Composition. But the present study is confined to Grammar teaching only. This is because of the availability of limited resources of computer facilities at the area where the research was conducted. For teaching other components of the language the use of sophisticated hardware is a must. Hence grammar alone is taken for up the study.

2. Secondary course is of two years duration wherein different subjects are taught. In this research, IX Standard students are taken for study and this study is also confined to only one Grammatical unit namely 'Affixation', though there are other grammatical units. Though there are many grammatical units prescribed in the syllabus for secondary students, only one unit was taken for study taking into consideration of the time constraint. Since the tenth standard students would be facing the public examinations, and the time factor is an important one for them they were not taken for study. Further normally since the medium of instruction is Tamil, the students of rural schools have a general feeling that learning of English grammar is difficult. If that negative feeling is removed at the beginning it self, they can learn well the language in the following year in which they will be facing the public examination. So the study is confined to grammar teaching to ninth standard students.
3. With regard to locale and sample, though there are good many number of schools situated in rural areas and students, only two schools in rural area (Karambiyam and Orathanadu) and ninety students are selected as samples.

The experimental group of students belonged to GHSS-Orathanadu. This place was selected because the researcher worked in that school. The control group of students belonged to GHSS-Karambaiyam. This school was selected because of the easy access to the school which is 25 kms. away from the experimental group locale and the cooperation of the head of the institution and the staff. The control and experimental groups are to be equated. The schools selected are of the same level as far as the learners, locality and administration is concerned. To be free from the interaction of extraneous variables, the study is limited to the above schools.

4. Only boys are taken for study and girls are not included in this study.

The social taboos and cultural fashions prevailing in rural area like Orathanadu do not permit the girl students of age group 13-15 to work before computers in the closed rooms outside the school hours. Hence they are not included in this work.

Apart from the above limitations, Multimedia kits are not used in this research since the use of those sophisticated devices are far beyond the capacity of a rural student who has got no previous experience in operating computers. The effectiveness of multimedia kits would form a basis for further research.
The study is confined to the rural area only. There may be possibilities of getting different results with reference to the interrelations between CALL and parental encouragement and between CALL and interest in foreign language if this study had been conducted in a town/city atmosphere. Further since the researcher wanted to avoid the interference of sex as an independent variable the sample was limited to boys only.

6.7. Findings of the Study:

The researcher framed fourteen hypotheses for the study. All of them were examined for their acceptance or otherwise. The following are the findings.

1. It has been found that the learners taught English grammar through CALL achieved better than the learners taught through conventional method in the achievement scores.

2. It has been found that the learners taught English grammar through CALL achieved better in their 'Knowledge' in learning grammar than the learners taught through conventional method.

3. It has been found that the learners taught English grammar through CALL achieved better in their 'Understanding' in learning grammar than the learners taught through conventional method.

4. It has been found that the learners taught English grammar through CALL achieved better in their 'Application' in learning grammar than the learners taught through conventional method.
5. It has been found that the learners taught English grammar through CALL achieved better in the delayed post test than the learners taught through conventional method in the achievement scores.

6. It has been found that the slow learners taught English grammar through CALL achieved better than the slow learners taught through conventional method in their achievement scores.

7. It has been found that the slow learners taught English grammar through CALL achieved better in the delayed post test than the slow learners taught through conventional method in their achievement scores.

8. It has been found out that the mean scores in attitude towards the study of English of the learners taught through CALL is more than the mean scores in attitude towards the study of English of the learners taught through the conventional method.

9. It has been found out that there is a significant difference in the mean gain scores in the attitude towards English Study of the learners taught through CALL between the pre-test and post-test.

10. It has been found out that there is no significant correlation between the parental encouragement and achievement of learners in learning grammar.

11. It has been found out that there is no significant correlation between the interest in foreign languages and achievement of learners in learning grammar.
12. It has been found out that there is a positive correlation between the attitude toward computers and the achievement scores of the Experimental group.

13. It has been found out that there is no interaction effect between intelligence and method of teaching on the achievement of learners of the Experimental group.

14. It has been found out that there is no significant interaction effect between study habits and method of teaching on the achievement of learners of the Experimental group.

Out of the above findings, findings 1, 2, 3, 4, 9 and 14 are found to be in line with the previous works of Chandra (1986), Sinha (1998), Shanmugasundaram and Stella (1990) and Jayathilagan (1992).


With reference to findings 5, 6, 7, 8, 9, 10, 11 and 12, to the best of the knowledge of this researcher no literature is available to confirm whether the above findings support or contradict with the previous studies.
6.7. Recommendations:

1. CALL may be used for the slow learners to improve their achievement scores with suitable modifications like Teacher Support System.

   CALL is not of common use as far as Tamilnadu is concerned. Further the teachers in most of the schools are not acquainted with CALL. If an orientation about the use of CALL is offered to English teachers and if it is widely used with modification of Teacher Support System, CALL will have its impact on the slow learners in improving their achievement scores.

2. CALL may be used for those with poor study habits as the study has shown a favourable result.

   Poor study habit is one of the reasons for poor achievement in English at school level. CALL, being a new technique for the learners, will promote the interest of the learners with poor study habit. So CALL will serve as a remedy for such learners when it is properly used in learning of English language.

3. CALL may be used for underachievers to benefit more by this technique of teaching.

   The reasons for underachievement are many. Irrespective of the reasons for the underachievement CALL has shown improvement in rural schools. The use of CALL will have the impact on the underachievement, since it has been proved to be the effective method of teaching and learning English.
4. CALL may be incorporated into the regular curriculum to enable learners benefit more.

Though CALL has been proved to be an effective technique of teaching and learning English in Tamilnadu, especially in rural schools it has not been incorporated into the regular curriculum. The use of CALL is a rare phenomenon as, far as the school curriculum is concerned. So incorporation of CALL into the regular curriculum will benefit the learners more as far as their learning of English is concerned.

5. A CALL SOFTWARE BANK may be set up at the District level educational authority's office.

Availability of the CALL software is a problem for the schools. Of course the computers for any school can be obtained from the community resources. But there will be problems in getting the software. To overcome this with the principle of school complex, a CALL software bank may be set up at the district level educational authority's office so that it can be used in any school. This also helps to overcome the financial strains of the schools.

6. There are some enthusiastic teachers and research scholars scattered all over the different parts of the country who are engaged/will be engaged in the development of CALL softwares. Hence a SPECIAL INTEREST GROUP in this area may be created at National Council of Educational Research and Training (NCERT) or State Council of Educational Research and Training (SCERT) so that
there can be a lot of exchange of information and technical know-
how, and interaction where possible.

The interested and enthusiastic teachers are scattered. Though they are engaged in software development of CALL, lack of proper interaction becomes a hurdle. There is no chance to promote the interest and enthusiasm of such teachers. If they are identified and a special interest group is organised at NCERT or SCERT there will be exchange of informations and technical know-
how. Such an interaction will promote the interest of such teachers and there will be a chance to find out solutions for some of the problems. This will result in the increased use of CALL and better achievement is possible in the teaching and learning process.

7. Some preliminary/introductory courses about the programming concept in computers may be given to teachers of English working at Middle, Secondary, Higher Secondary Schools and Colleges so that they can be stimulated to develop softwares suitable to their classes.

For the effective use of any technique, the knowledge of the technique to the user is vital. Further variations are too large to have a common CALL software. The need and the learnability vary. The teachers at various schools and at various levels alone are aware of the differences. It is difficult to generalise CALL. To overcome this difficulty and to properly use the CALL technique, some preliminary/introductory courses about the concept
of programming in computers, if offered to English teachers at different levels (middle, secondary, higher secondary and colleges) will have a good result as far as English teaching and learning is concerned. Further that will provide a chance for the interaction among the teachers.

8. The Authorities of Education Department, Tamilnadu may arrange training programmes and seminars pertaining to CALL by inviting authorities in this field and operate softwares during the sessions so that the language teachers can seriously think of using them in their institutions.

Without free service training any practice cannot be effective. Moreover CALL is a new technique with which most of the teachers are familiar. So for the effective use of CALL, the authorities of Education Department may arrange the training programmes, inservice training programmes, seminars and workshops pertaining to CALL by inviting the authorities of the concerned field. Especially the operation technique of CALL softwares to the language teaching teachers also can be organised at regular intervals. This will lead the teachers to think seriously about the area of CALL. Moreover this will induce the teachers to use them in their institutions.

9. The Authorities of Education Department, Tamilnadu may allot funds to purchase a computer and the relevant softwares for the use at the District Institute of Education and Training (DIET) centres.
In India, allocation of fund is a problem in implementing any new technique since the investment is considerably high. If the authorities of education department allot more funds, the institutions will experience no difficulty in the purchase of the computers and the relevant softwares. Then the institutions will be enriched with computers and non-availability of the softwares will not be a hurdle to the institutions. Availability of computers will be a motivating factor to practise CALL.

10. A short term professional training may be given to DIET peer educators who in turn can give training to the participants, who are interested in this field.

It is difficult to give a centralised training for all the teachers teaching English. To overcome this strain, training in CALL can be given to educational bodies which are directly or indirectly concerned with the teachers. For example the peer educators in DIET are directly linked with teachers who are teaching English. The NCERT, RIE, SCERT or the authorities who are competent can provide short term professional training to DIET peer educators who in turn in a decentralised pattern can give training to the teachers in CALL who are directly involved in the task of teaching English.

11. In the developing countries, like the USA, the concept of PUBLIC DOMAIN SOFTWARE is very popular. The teachers and research scholars share their programs and also make them available to the
students, and the public without charging any fee. Such awareness must be created in India so that the teachers and students will be benefitted by this. To create such an awareness, some institution should come forward and start journals exclusively devoted to CALL.

In the developing countries like USA, the concept of Public Domain Software is very popular. The experts, teachers and research scholars periodically share their programmes and they make them available to the students and the interested public free of cost. Such practice should be developed in India and awareness about such availabilities should be created so that the teachers and students will derive the benefits. For this job and to create such an awareness, some institutions should come forward and publish journals and periodicals exclusively devoted to CALL. Further care should be taken to see that these journals are available at the district level authority's office.

12. Central Institute of English and Foreign Languages (CIEFL), Hyderabad, the premier institute in the area of English Studies and Language, may take these initiative as suggested earlier.

The premier institute in the area of English studies and language, Central Institute of English and Foreign Languages, Hyderabad, may take up these initiatives suggested above since this institute is directly concerned with some innovative works in language teaching.
CIEFL has already produced Audio and Video materials for the teaching of English. It may concentrate on developing CALL softwares too.

CIEFL has already produced Audio and Video softwares which have been proved to be effective at all levels in the process of teaching and learning English. Since the institute has a previous experience it may also concentrate on developing CALL softwares too and as recommended earlier it can take up the task of creating awareness about it among the English teachers. The CALL softwares may be developed so as to suit all the categories of the schools.

There is a need for producing electronic, multi-lingual learners’ dictionaries. By using the GIST (Graphics and Indian Script Terminal) technology CIEFL can develop such dictionaries.

For learning a language new, a dictionary at learner’s level is a must. Such dictionaries must be motivating and attractive. In this aspect there is a need for the production of electronic, multi-lingual learners’ dictionaries to suit the teachers and learners of all all regions of the countries. CIEFL can develop such dictionaries by using the GIST (Graphics and Indian Script Terminal) technology.

Developing a CALL software may be included as a project work to the students of English who do their Master degree at Colleges of Education.
To make CALL popular at all levels the task of developing the CALL software can be taken up by the colleges of Education which are associated with the teachers and the schools. For example the teachers of English in colleges of Education can take up developing CALL software as a major or minor project. Further to make it still popular developing CALL software can be assigned as a project work to the students of English doing their Master degree at the colleges of Education. Such students may be directed to do the job by conducting experiments in the local schools. This will more be a practical approach.

6.8. Suggestions for further Research:

1. CALL softwares on other topics in Grammar can be developed and experimented for their effectiveness.

   The researcher has confined his study to the 'Affixation' part of grammar alone. There are other topics in grammar. When all the aspects of grammar are taught-learnt effectively one can expect some achievement in grammar which is basic and major component of English. So CALL softwares on other topics in grammar can be developed and can be experimented for their effectiveness in the process of teaching and learning.

2. The effectiveness of CALL on the teaching of prose, poetry and composition can be studied.

   Successful teaching/learning of any language is not confined only to its grammar. There are other aspects of language which
are equally important. Only when all the components of English are learnt one can think of total achievement in learning English. So CALL softwares can be developed on the teaching of prose, poetry and composition and the effectiveness of CALL in teaching/learning in those segments of the language can be studied.

3. The effectiveness of CALL on the teaching of prose and poetry can be compared.

The effectiveness of any technique need not be relatively the same on the different components of any language. So also English language has different components and the effectiveness of CALL on them may or may not be the same. The effectiveness of CALL on teaching/learning of prose and poetry can be compared and it can be relatively studied.

4. The effectiveness of CALL on the teaching of grammar and composition can be compared.

English composition is a component highly related to grammar. The relationship between grammar and composition can be taken up for the study. So the interrelationship between grammar and composition and the effectiveness of CALL on the teaching/learning of grammar and composition can be relatively compared and contrasted.

5. The effectiveness of CALL involving English medium schools can be studied.
The medium of instruction followed in the school has an impact on the learning of English. The researcher has carried out his study in schools which have Tamil as the medium of instruction. Taking the medium of instruction as a variable the effectiveness of CALL in teaching/learning English grammar involving schools offering English as the medium of instruction can be studied.

6. The effectiveness of CALL involving schools in rural and urban areas can be compared.

Locality variation is a hurdle in practising any new technique in teaching learning process. CALL cannot be an exemption to it. In Tamilnadu there are schools in rural and urban areas following the same curriculum and pattern of evaluation. So the relative effectiveness of CALL involving rural and urban areas can be taken up for the study and the result may be compared to study the effectiveness of CALL in teaching-learning English.

7. The relationship between other inter related variables as computer literacy, teachers attitude toward computer over the effectiveness of CALL can be taken up for research.

There are interdependence of variables and there are interrelated variables. For example there is a relationship between computer literacy, teachers attitude towards computer and
the effectiveness of CALL. The relationship between computer literacy, teachers attitude towards computer and the effectiveness of CALL can be taken up for further research.

8. The personality variables of the learners like Dependence Vs. Autonomy, Introvert Vs. Extrovert may be researched into.

The individual's personality variables of the learners have impact in the teaching, learning process. There is every chance to have variations between Dependence Vs. Autonomy, Introvert Vs. Extrovert in achievement of anything. Learning is also subjected to the variations. Logically CALL also have effect in the teaching learning process. The effectiveness of CALL and the personality variables of learners like dependence vs. autonomy, introvert vs. extrovert have to researched into.

9. Small Group Learning through CALL can be tried on experimental groups to compare the result with the findings of this study.

Research findings will have higher utility if they are applicable to a mass. CALL will be really effective if it can be applied to groups in the classroom situation of our schools. So small group learning through CALL can be researched on the experimental groups to compare the result with the findings of this study.

10. The speed of learning can be critically experimented taking into consideration the various factors like age, sex, class and the nature of institutions.
Learning is a process which is affected by various factors like age, sex, class and the nature of institutions. Learning cannot be generalised. The rate of learning is subjected to the above mentioned factors. Though CALL has its effectiveness in teaching learning process the rate of learning is liable to be subjected to variations. So the speed of learning can be critically experimented with CALL taking into consideration the various factors like age, sex, class and the nature of institutions.

11. The interactive capability of the students with teachers as well as among themselves can be deeply studied.

Interaction of the learners with the teacher and among themselves inside the class room has been proved to be effective as a new technique of teaching learning. The effectiveness of CALL can be enhanced with the interactive capability of the students with teachers as well as among themselves. Using CALL the interactive capability of the learners with the teachers (with modifications of teacher supported system) as well as among themselves can be deeply studied.

12. In this study only two affective variables in the study of a foreign language are taken. Other affective variables like Integrative Orientation, Instrumental Orientation, English class Anxiety may be studied with reference to CALL.
In this study the researcher has taken up only two affective variables in the study of a foreign language. There are other affective variables like Integrative Orientation, Instrumental Orientation, English class Anxiety which play a role in teaching, learning English. Such affective variables can be studied deeply with reference to CALL.

The effectiveness of CALL technique can be studied among girl students.

The effectiveness of CALL technique can be compared between boys and girls group.

Conclusion:

This research has proved beyond doubt the effectiveness of material in the teaching of English grammar which has remained a problem on schools. The introduction of computers has solved age-old problem of teaching grammar at the early level. Similar packages can be preferred for other areas of English grammar so the students will learn them with more enthusiasm and without