6.1. Summary

After a dedicated investigation for a period of three years, the investigator arrives at certain scientific conclusions. The worth of his investigations and the values of his findings largely depend on how the investigator summarises his research in a systematic way for others to understand and to follow or apply, if necessary. This chapter serves as a platform for this purpose for the researcher. This chapter highlights the rationale for selecting this problem, enumerates the objectives and the related hypotheses, specifies the need and importance of the study. Also, this chapter recapitulates the process applied and the products obtained. Yes, this chapter outlines the methodology adopted and lists out the findings arrived at. In addition, this chapter lays out the possible constructive suggestions for further research. Further, this chapter amplifies the implications of the study besides indicating the limitations of the study.
6.1.1. Introduction

It is impossible to imagine life without language. Such a life would be as tasteless as saltless food. Life may offer colour and variety. But man will remain dull and dumb if he is not able to communicate / share his thoughts, feelings and experiences to/with others. Non – verbal communication is possible to a certain extent only. It would be like the traffic signals that display limited number of commands like ‘stop’, ‘go’, turn right, etc. Had language not been invented in both its media, (spoken and written) man’s thoughts and experiences could not have come down through generation after generation. In fact, language is the most wonderful gift of nature which has added essence and spirit to man’s life and thereby made it colourful and tasteful.

Surprisingly, language has the capacity to meet all our demands. In fact, it is as versatile as life itself. There is literally no limit to the number of sentences that we can create in English. It is certainly not because of its large vocabulary. Then how? The means by which sentences are constructed are limited. The rules used to construct sentences are finite in number, whereas the potential sentences that emanate from them are limitless in number and variety. Let us examine second language learning and the problems involved in it.

English is an international language. It serves as an effective means of communication throughout the world. English is a casement through which one can see the world. English plays a vital role in science and technology. All the technical terms and the names are commonly used in English in the description of science and technology concepts. It is an effective instrument for research work. Without adequate knowledge of English, reference and research work will be beyond the limit of the individual. As already mentioned earlier, English is an international lingua-franca.
Teaching English is the toughest task for a teacher in Indian classrooms. Most of the students are found weak in English. In addition to that, they have an aversion for that. They find it unpalatable and burdensome. Most of the students are unmotivated also. They don’t give much importance to English subject as they do to other subjects. Hence, it is very difficult to teach a neglected subject to the unwilling students. As this subject is not given due respect, it becomes very assiduous to motivate the students or to ensure learning readiness.

English education plays a vital role in human resource development. Education is the king pin of human resource development. It provides for intellectual development, personality development and social development. It ensures qualitative improvement of labour forces and service cadres. English education adds fine feathers to the all round development of individuals. If an individual has adequate communicative skill in English, he feels better equipped and more competent for any kind of social interaction and transaction. It is English knowledge that makes an individual known to the entire world. Without adequate mastery in English, an individual, however brilliant or knowledgeable he may be in his field, cannot become an international celebrity. To teach a language of utmost importance to the students of a particular standard who differ from one another in a variety of ways is not an easy job. A teacher cannot rely on the traditional method alone to achieve his instructional objectives. It warrants introduction of innovative teaching learning strategies in the classroom teaching learning process. This is where the metacognitive teaching learning strategy exactly fits in.

Metacognition is an important concept in cognitive theory. It consists of two basic processes occurring simultaneously. One process is monitoring the progress as the learning takes place and the other process is making changes and adopting appropriate strategy when there is such a
need. It encompasses self-reflection, self-responsibility and initiative as well as goal settings and time management. Metacognition is the knowledge of one’s cognitive processes and the efficient use of this self-awareness to self-regulate these cognitive processes.

The basic components of metacognition are i) metacognitive knowledge ii) metacognitive regulation and 3) metacognitive experiences. In this rapidly changing world, a teacher can be said to be successful in his arduous task only when he develops skills that will become absolute. Metacognitive strategies are essential for the twenty first century because they enable students to cope successfully with new situations. Persons who are well developed metacognition are confident that they can learn any difficult concept. They are able to make accurate assessments of why they succeed in learning. They understand clearly about inaccuracies when failure occurs during tasks. They take constant effort to expand their repertoire of strategies for learning. They are capable of devising strategies to the learning task making adjustment when necessary. They do not hesitate to ask for guidance from peers or the teacher. They take time to think about their own thinking and view themselves as continual learners and thinkers. Hence, there is an urgent need which stands well justified to apply MTLS to teach English to various categories of students at secondary level.

A classroom is a heterogeneous group which contains students with different learning readiness, learning rates and learning style. An instructional strategy can be considered successful when it reaches out to the various kinds of learners in the general education classroom. When we follow the traditional method, the students in the lowest rung are left far behind. They become neglected and they ultimately lose interest and confidence in learning in course of time. They experience failure syndromes and discontinue their studies at upper primary level or at
secondary level. Metacognitive strategy is not concerned with teaching and learning alone but also it sets the minds of students to rethink about their thinking process. It moulds and activates the learners to put their mind and soul into the task at hand. This sincere effort makes success an attainable target for them. Once they taste the fruit of success, success will build on success. Hence, this strategy is very much emphasised by the educators of all kinds at every level all over the world.

This field has drawn the attention of the researchers to a very great extent all over the world. Considerable research works have been carried out on metacognitive strategy at various levels of education. A globalwise analysis of research done so far reveals that quite a number of studies have been attempted in the western countries and the eastern countries have also fallen in line very recently. Makeown et at 2007; Lopez Pamela, 1992; Boulware Gooden et all 2007; have established that the metacognitive strategies are effective in developing the monitoring and the comprehension skills of the students. Camahalat et al 2006 have verified the effectiveness of metacognitive strategy with special reference to disabled students and other backward students.

Cardelle 1995; Berkouity et al 2004; have established the relative effectiveness of metacognitive strategies with reference to low achievers, under achievers and high achievers. There are various studies which try to highlight the efficacy of metacognitive strategies in developing listening, reading and writing skills among the primary school students. (Lopel et al 1992; Boulware et al 2007; Howtveen et al 2007; Bruce, 1999; Lee 1990; Kuhns, 1989; Dermody, 1998). The effectiveness of metacognitive strategies in teaching various subjects and particularly in developing language skills at middle school level as well as at high school level have been established by many researches (Mckeown, 2007; Higgins, 2000; Yore, 1993; Bruce, 1989; Smith, 1992; Martin, 2005; Eilers, 2006). There


are researchers who have successfully applied the metacognitive strategies at university level also. They have verified that the metacognitive strategy is very useful in language learning (Aldelhafez, 2006).

While the western scenario is much illuminating and enlightening, the Indian scenario is not much luminous. Only a few pioneer studies have been attempted on MTLS in India. It still remains as a much dreaded untrodden area. The research in this area can provide for better pastures for both teachers and students to accomplish their respective task with considerable ease and success. Hence, an earnest attempt is made in this humble research to apply the MTLS to teach English to various categories of students at secondary level in Indian setting and to assess the advantage of the applied strategy over the traditional lecture method.

6.1.2. Title of the Problem

"EFFECTIVENESS OF METACOGNITIVE TEACHING LEARNING STRATEGIES ON THE ACHIEVEMENT OF VARIOUS CATEGORIES OF Xth STANDARD STUDENTS IN ENGLISH"

6.1.3. Objectives of the Study

General Objectives

1. To develop metacognitive teaching-learning strategies to teach/learn English at secondary level.
2. To assess the awareness of teachers and students about the metacognitive teaching-learning strategies.
3. To identify the various categories of students at secondary level.
4. To find out the extent of effectiveness of the metacognitive teaching-learning strategies on achievement of various categories of students in English at secondary level.
5. To assess the advantage of the metacognitive teaching-learning strategies over the traditional lecture method.
6.1.4. Specific Objectives

1) To assess whether there is any significant difference in the level of awareness about metacognitive teaching learning strategies between the control groups and the experimental groups in rural and urban schools before the experimental treatment.

2) To assess whether there is any significant difference in the pre-test performance between the control group students taught through traditional lecture method (TLM) and the experimental group students taught through metacognitive teaching-learning strategies (MTLS) in both rural and urban schools.

3) To know whether there exists any significant difference in the pre-test performance between the control group students and the experimental group students in respect of each category i.e. above average students, average students and below average students in both rural and urban schools.

4) To find out whether there is any significant difference in the pre-test performance between the rural students and the urban students in terms of group as a whole and in respect of each category i.e. above average students, average students and below average students.

5) To know whether there is any significant difference in the pre-test performance among the various categories of students in the control group taught through traditional lecture method.

6) To find out whether there exists any significant difference in the pre-test performance among the various categories of students in the experimental group taught through MTLS.

7) To know whether there is any significant difference in the pre-test performance between the boys and the girls of the control group and the experimental group in both rural and urban schools.
8) To assess whether there is any significant difference in the level of awareness about metacognitive teaching learning strategies between the control groups and the experimental groups in rural and urban schools after the experimental treatment.

9) To assess whether there is any significant difference in the post-test performance between the control group students taught through TLM and the experimental group students taught through MTLS in both rural and urban schools.

10) To know whether there is any significant difference in the post-test performance between the control group students and the experimental group students in respect of each category i.e. above average students, average students and below average students in both rural and urban schools.

11) To find out whether there is any significant difference in the post-test performance between the rural students and the urban students in terms of group as a whole and in respect of each category i.e. above average students, average students and below average students.

12) To find out whether there exists any significant difference in the post-test performance among the various categories of students in the control groups taught through TLM.

13) To measure whether there is any significant difference in the post-test performance among the various categories of students in the experimental groups taught through MTLS.

14) To know whether there exists any significant difference in the post-test performance between the boys and girls of the control group and the experimental group in both rural and urban schools.

15) To assess whether there is any significant difference in the level of awareness of teachers and students about MTLS in both control group
and experimental group in rural and urban schools between before and after the experiment.

16) To verify whether there exists any significant difference in the performance of the control group students and the experimental group students in both rural and urban schools between the pre-test and the post-test.

17) To examine whether there is any significant difference in the performance of each category of students in the control group and the experimental group in both rural and urban schools between the pre-test and the post-test.

18) To assess whether there exists any significant difference in the performance of the boys and the girls in both the control group and the experimental group in both rural and urban schools between the pre-test and the post-test.

19) To assess whether there is any significant difference in the retention test performance between the control group students and the experimental group students in both rural and urban schools.

20) To know whether there is any significant difference in the retention test performance between the control group students and the experimental group students in respect of each category i.e. above average students, average students and below average students in both rural and urban schools.

21) To find out whether there is any significant difference in the retention test performance between the rural students and the urban students in terms of group as a whole and in respect of each category i.e. above average students, average students and below average students.

22) To assess whether there exists any significant difference in the retention test performance between the boys and the girls of the
control group and the experimental group in both rural and urban schools.

23) To assess whether there exists any significant difference in the performance of the control group students and the experimental group students in both rural and urban schools between the post-test and the retention test.

24) To examine whether there is any significant difference in the performance of each category of students in the control group and the experimental group in both rural and urban schools between the post-test and the retention test.

25) To assess whether there exists any significant difference in the performance of the boys and the girls in the control group and the experimental group in both rural and urban schools between the post-test and the retention test.

6.1.5. Assumptions of the Study

1) There is no awareness among the students about the metacognitive teaching-learning strategies whereas there is awareness among the teachers about metacognitive teaching-learning strategies. But the extent of awareness is not adequate.

2) There are ways and means to identify the various categories of students in general education classroom.

3) The developed metacognitive teaching-learning strategies will enhance the achievement of various categories of students in English.

4) The metacognitive teaching-learning strategies will be effective to various categories of students but the degree of relative effectiveness may vary from category to category.
5) The applied metacognitive teaching-learning strategies will enable the backward students to cope with normal students to a considerable extent.

6) The developed metacognitive instructional strategy will have distinct advantage over the traditional lecture method.

6.1.6. Hypotheses of the Study

1) There is no significant difference in the level of awareness about metacognitive teaching learning strategies between the control groups and the experimental groups in rural and urban schools before the experimental treatment.

2) There is no significant difference in the pre-test performance between the control group students taught through traditional lecture method (TLM) and the experimental group students taught through metacognitive teaching-learning strategies (MTLS) in both rural and urban schools.

3) There exists no significant difference in the pre-test performance between the control group students and the experimental group students in respect of each category i.e. above average students, average students and below average students in both rural and urban schools.

4) There is significant differences in the pre-test performance between the rural students and the urban students in terms of group as a whole and in respect of each category i.e. above average students, average students and below average students.

5) There is significant difference in the pre-test performance among the various categories of students in the control group taught through traditional lecture method.
6) There exists significant difference in the pre-test performance among the various categories of students in the experimental group taught through MTLS.

7) There is no significant difference in the pre-test performance between the boys and the girls of the control group and the experimental group in both rural and urban schools.

8) There is significant difference is the level of awareness about metacognitive teaching learning strategies between the control groups and experimental groups in rural and urban schools after the experimental treatment.

9) There is significant difference in the post-test performance between the control group students taught through TLM and the experimental group students taught through MTLS in both rural and urban schools.

10) There is significant difference in the post-test performance between the control group students and the experimental group students in respect of each category i.e. above average students, average students and below average students in both rural and urban schools.

11) There is no significant difference in the post-test performance between the rural students and the urban students in terms of group as a whole and in respect of each category i.e. above average students, average students and below average students.

12) There exists significant difference in the post-test performance among the various categories of students in the control group taught through TLM.

13) There is significant difference in the post-test performance among the various categories of students in the experimental group taught through MTLS.
14) There exists no significant difference in the post-test performance between the boys and the girls of the control group and the experimental group in both rural and urban schools.

15) There is significant difference in the levels of awareness of the teachers and students about MTLS in both control group and experimental group in rural and urban schools between before and after the experiment.

16) There exists significant difference in the performance of the control group student and the experimental group students in both rural and urban schools between the pre-test and the post-test.

17) There is significant difference in the performance of each category of students in the control group and the experimental group in both rural and urban schools between the pre-test and the post-test.

18) There exists no significant difference in the performance of the boys and the girls in both the control group and the experimental group in both rural and urban schools between the pre-test and the post-test.

19) There is significant difference in the retention test performance between the control group students and the experimental group students in both rural and urban schools.

20) There is significant difference in the retention test performance between the control group students and the experimental group students in respect of each category i.e. above average students, average students and below average students in both rural and urban schools.

21) There is no significant difference in the retention test performance between the rural students and the urban students in terms of group as a whole and in respect of each category i.e. above average students, average students and below average students.
22) There exists no significant difference in the retention test performance between the boys and the girls of the control group and the experimental group in both rural and urban schools.

23) There exists no significant difference in the performance of the control group students and the experimental group students in both rural and urban schools between the post-test and the retention test.

24) There is no significant difference in the performance of each category of students in the control group and the experimental group in both rural and urban schools between the post-test and the retention test.

25) There exists no significant difference in the performance of the boys and the girls in the control group and the experimental group in both rural and urban schools between the post-test and the retention test.

6.1.7. Scope of the Study

An effective instructional strategy should cater to pupil diversities and it should reach out to all learners. The existing mode of instruction i.e., the traditional lecture method does not rise to the occasion. It does not cater to individual differences and pupil diversities to a great extent. Also, the current trend is learner centred mode of instruction. With these views in mind, the metacognitive strategy is earmarked for the study to verify the effectiveness of the metacognitive strategy with reference to different categories of pupils in an inclusive setting.

The metacognitive strategies cater to pupil diversities i.e. low achievers, under achievers and normal students. Low achievers in the rural area include mostly socially disadvantaged students, culturally affected, socio-economically backward, slow learners, students with mild learning disability and students with manageable handicaps. The proposed strategy can accommodate the above pupil diversities. Moreover, the metacognitive strategies are mostly learner centred and they cater to auto-instruction to a great extent. They ensure student participation in a better way and provide for overcoming barriers to learning.
Sixty students from St. Joseph Higher Secondary School, Dindigul Tamilnadu, are selected for the study to represent the urban population. Similarly, sixty students from S. S. H. N. Hr. Secondary School, Muhavur are also selected to represent the rural population. They are classified into two matching groups. One group is experimental group which is taught through metacognitive strategy and the other group is control group and it is taught through traditional lecture method. Each group consists of ten above average students, ten average students and ten below average students.

6.1.8. Need and Importance of the Study

A classroom contains various categories of students who differ from one another in a variety of ways. As far as learning is concerned, they differ from one another in entering behaviour, learning readiness, learning rate and learning style. Hence, the normal classroom strategy cannot cater to the needs of all the students and it cannot reach out to all the learners alike. So a special strategy, which can enhance the critical thinking of the students is very much essential to ensure better learning, smoother information processing, longer retention and easier recall. The proposed study is an earnest attempt in this regard.

A normal classroom is a miniature society comprising diverse categories of children with varied abilities and disabilities. These students are the future citizens of our nation. They are going to be the pillars of the country. It is the primary duty of the teacher to see that each pillar is as strong as the other. This warrants a special instructional strategy which can reach out to all the learners. That is the only way to effectuate optimum human resource development.

All children including the educationally backward children too have every fundamental right to live and participate in all settings and programmes that are normalised. Hence, there arises the need for inclusive education which requires integrating children with special needs in
regular classrooms in normal schools. In the inclusive setting, where the excluded are included, an effective instructional strategy alone can reach out to all the learners. In such heterogeneous group, the normal traditional lecture method cannot yield the desired result. This envisages that special instructional strategy is required for such unique setting. Any instruction based on cognitive strategy can bring about the anticipated outcome in the teaching-learning process. Cognitive and metacognitive researches have generated new orientations in offering interventional measures to educationally backward children and thus ensure provisions to fulfil the principles of inclusive education.

Existing researches on cognitive and metacognitive instruction have focussed on the development and refinement of specific strategies. The findings of Bryant (1985), Slifie et al (1985) confirm that metacognitive training has been effective for developing mathematical and reading abilities of the students. The efficacy of the strategy in the writing tasks has substantially been verified by Brown (1978), Paris et al (1986) and Paliuscar (1982). Researches of Gordon & Barum (1982) and Alley & Deshler (1979) have established the links between metacognitive strategy and improved writing performance.

Metacognitive approach has also yielded fruitful results in the field of computer learning, medicine, nursing and defence services. Metacognitive researches have pervaded the learning disability field. Ellis et al., (1982) and Wong (1982) have reported that cognitive strategy applied to learning disabled students promoted self regulated learning.

As students become more skilled at using metacognitive strategies, they gain confidence and become more independent as learners. Independence leads to ownership as students realise that they can pursue their own intellectual needs and discover a world of information at their
fingertips. The task of educators is to acknowledge, cultivate, exploit and enhance the metacognitive capabilities of all learners.

Metacognitive approach enables students to benefit from instruction (Carr, Kurtz, Schneider, Turner & Borkowshi, 1989; Van Zile-Tamsen, 1996) and influences the use and maintenance of cognitive strategies. While there are several approaches to metacognitive instruction, the most effective one involves providing the learner with both knowledge of cognitive processes and strategies (to be used as metacognitive knowledge) and experience or practice in using both cognitive and metacognitive strategies and evaluating the outcomes of their efforts (develops metacognitive regulation). Simply providing knowledge without experience or vice versa does not seem to be sufficient for the development of metacognitive control (Livingston, 1996).

The findings of the above studies and the rich experience of the investigator in school education have prompted him to select this complex area to devise an instructional strategy based on cognitive principles and perspectives so as to reach out to all the learners in general education classroom. The present study is an earnest attempt in this regard.

6.1.9. Methodology

The various steps followed in the methodology of the study are development of a rating scale to assess the awareness of the teachers and the students about the metacognitive strategy, construction of achievement test, selecting samples and sample design, applying the metacognitive strategies to teach English to the tenth standard students, data collection and finally the statistical techniques used in the study for arriving at dependable scientific conclusions.
6.1.9.1. Development of Rating Scale

In the present study to assess the awareness of teachers and students a rating scale consisting of twenty statements relating to the principles and process of MTLS was developed by the investigator. The rating scale was administered to ten teachers and twenty students for a pilot study. On the basis of the scores obtained in the pilot study, reliability of rating scale was established by using split half method. The r-value (0.88) indicates the rating scale used in the study is reliable one. The validity of the rating scale was verified by means of experts opinion.

The rating scale was administered to teachers and the Tamil version of the rating scale was administered to the students to assess their level of awareness about MTLS. The English version and the Tamil version of the rating scale are given in appendix I and II.

6.1.9.2. Construction of Achievement Test

To evaluate the effectiveness of the metacognitive teaching learning strategy used in this study and to assess the achievement of the students taught through the metacognitive teaching learning strategy, an achievement test was constructed. The test was constructed covering the Xth standard English syllabus.

Multiple choice test items, alternate choice yes or no / correct or incorrect test items, fill in the blanks test items and match the following test items were the types of questions used in the achievement test. The questions were framed so as to suit the level of the Std X students. Utmost care was taken to avoid ambiguity and ambivalence. The items were selected on the basis of item analysis. The final form of achievement test consisted of the aforesaid different types of objective type questions. Four alternatives were given for the multiple choice questions. The final form of achievement test is given in appendix-IV. The procedure adopted in the construction of the test and in establishing its validity and reliability are explained in chapter-IV.
Each item was scored ‘one’ mark for the correct response and ‘zero’ mark for the wrong response. The duration of the test was 2 hours. The same achievement test was used as pre-test, post-test and retention test in the study for the two groups (control group and experimental group) mentioned in the study.

6.1.9.3. Sample Design

In this study 60 students were selected from St. Joseph Higher Secondary School, Dindigul to form the control and the experimental group. They were matched ones before the experiment. Each group contained 10 above average students, 10 average students and 10 below average students. In similar manner, 60 students were selected from S.S.H.N. Higher Secondary School, Muhavur to representing the rural population and groups were formed as mentioned above. The control group was taught through the traditional lecture method and the experimental group was taught through metacognitive strategy. Both the groups were administered an achievement test. The same achievement test was used in the pre-test and post-test to assess the performance of the students and to measure the effectiveness of the applied strategy.

6.1.9.4. Data Collection

At the end of the experimental period, a post-test was conducted to the students of all the groups. After a lapse of 45 days, a retention test was also administered to all the groups in order to assess the efficacy of the applied strategy in terms of retention. The responses given by the students in the pre-test, post-test and retention test formed the vital data required for the analysis. The scores of the students in the pre-test, post-test and retention test are given in Appendices – VI and VII.
6.1.9.5. Scoring Procedure

The achievement test consists of 100 objective type questions. The total score of the test is 100. For correct answer, the score is one and for wrong answer the score is zero. The key to the achievement test is given in appendix –V.

6.1.9.6. Statistical Techniques used in the Study

The data obtained were analysed by using appropriate statistical techniques such as mean, standard deviation and t-test.

At the first stage, mean and standard deviation of the pre-test scores were calculated for each group. Then to know the effectiveness of the metacognitive strategy in enhancing the achievement of students in English, mean and standard deviation of the post-test scores were calculated. Likewise, mean and standard deviation were calculated for the retention test scores also. Based on the mean and S.D., t-test was applied to know the significant differences between the means.

6.1.9.7. Findings and Conclusions

1. There is no significant difference in the level of awareness about MTLS between the control group and the experimental group in both rural and urban schools before the experimentation. So there is no significant difference in the level of awareness about MTLS between the control group teachers and experimental groups teachers in both rural and urban schools. This table brings to light the urgent need for sensitisation programme for the teachers in service at present. It is in tune with the findings of Mallika (2012) and Iqbal (2012)

2. There is no significant difference in the pre-test performance between the control group students and the experimental group students in both rural and urban schools. The performance of the control group and the experimental group is very much alike in the pre-test. It also establishes that the control group and experimental group were matched ones before the experimental treatment. It is akin to the findings of Mallika(2012) and Iqbal (2012)
3. There is no significant difference in the pre-test performance between the control group students and the experimental group students in respect of each category, i.e. above average students and average students below average students in both rural and urban schools. It reveals that every corresponding category of students in the control group and the experimental group have evinced a matching performance in the pre-test. As in the macro analysis in Table-2, there is no significant difference between the corresponding category of students in the micro analysis also. Further, this micro analysis substantiates the matching of the groups in both rural and urban schools in terms of group as a whole and in terms of each category. It supports the findings of Vetriselvi (2012) and Susan (2002).

4. There is no significant difference in the pre-test performance between the rural students and the urban students in terms of group as a whole and in respect of each category, i.e. above average students, average students and below average students. It indicates that the rural students and the urban students in both the control group and experimental group have shown a matching performance in the pre-test. They all were matched ones before the experimental treatment. It contradicts the findings of Iqbal (2012) in whose study the urban students seem better.

5. There is significant difference in the pre-test performance among the various categories of students in the control groups taught through TLM in both rural and urban schools. The difference between the above average students and the below average students is very vast in both rural and urban control groups. Further, there is a significant difference between the above average students and the average students in the pre-test achievement in both rural and urban schools. The same degree of difference is found between the average students and the below average students in their achievement in the pre-test in both rural and urban control groups. It is in accordance with the findings of Iqbal (2012), Mallika (2012) and Vetriselvi (2012).
6. There exists significant difference in the pre-test performance among the various categories of students in the experimental group taught through MTLS in both rural and urban schools. The same pattern of difference between any two categories is found in both rural and urban experimental groups. The mean differences between any two categories are in tune with their classification into various categories of students on the basis of their achievement in the scholastic test. It is similar to the findings of Iqbal (2012), Mallika (2012) and Vetriselvi (2012).

7. There is no significant difference in the pre-test performance between the boys and girls of the control group and the experimental group in both rural and urban schools. Even though the mean values of the girls are better than that of the boys, the obtained t-values indicate that there is no significant variation in the pre-test performance between the boys and the girls. This table substantiates that the traditional lecture method as an instructional strategy, is equally effective for both boys and girls in both rural and urban schools. It supports the findings of Mallika (2012) and Iqbal (2012).

8. There is significant difference in the level of awareness of the teachers and students about MTLS between the control group and the experimental group in both rural and urban schools after the experimental treatment. In both the experimental groups, the teachers as well as the students possess a better awareness than their counterparts in both the control groups. The vertical increase in the level of awareness in respect of the experimental groups teachers and students can be attributed to the effectiveness of the experimental treatment i.e. the application of MTLS in the classroom teaching and learning process. This table also establishes that the applied strategy sharpens the competency of the teachers. Further, it enhances the learning rate of the students and refines the learning styles of the students to a considerable extent. This testifies to the advantage of
the applied strategy i.e. MTLS over the TLM. This finding is in tune with the findings of Kamali (2011).

9. There is significant difference in the post-test performance between the control group students taught through traditional lecture method and the experimental group students taught through MTLS in both rural and urban schools. In the pre-test performance, both the control group and the experimental group were very much alike in both types of schools. But in post-test performance, there is a vast difference between the control group students and the experimental group students in both rural and urban schools. The significant difference in the post-test performance between the control group and experimental group can be attributed to the efficacy of the applied strategy i.e. MTLS. A comparative study of Table-1 and Table-9 substantiates the advantage of MTLS over the traditional lecture method. This comparative analysis further establishes that the applied strategy is equally effective to both rural and urban students. This finding is similar to the findings of Iqball (2012), Susan (2007) and Antony (1999).

10. There is significant difference in the post-test performance between the control group students and the experimental group students in respect of each category i.e. above average students, average students and below average students in both rural and urban schools. All the categories of students in control group and experimental group in both rural and urban schools were very much alike in the pre-test performance. But in the post-test, all the categories of students in the experimental group in both rural and urban schools have made impressive mean gains. As a result, there is a significant difference in the post-test performance of above average students, average students and below average students between the control group and experimental group in both rural and urban schools. The significant difference between control group and experimental group in respect of each category in each type of school can be attributed to effectiveness
of applied strategy i.e. MTLS. This micro analysis also establishes (refer table-2 and 10) the distinct advantage of MLTS over the traditional method. It is in accordance with the findings of Mallika (2012), Vetriselvi (2012), Abdelhafez (2006) and Brown (1987).

11. There is no significant difference in the post-test performance between the rural students and urban students in terms of group as a whole and in respect of each category i.e. above average students average students and below average students. As for the average students, there is significant difference in the post-test performance between the rural experimental group and the urban experimental group. The micro analysis implies that the applied strategy i.e. MTLS is effective to all the categories of students in both rural and urban schools. It has been more effective to the average students of urban experimental group than it has been to any other category in any type of school. It contradicts the findings of Iqbal (2012), in whose study urban students seem better.

12. There is significant difference in the post-test performance among the various categories of students in both rural and urban control groups. The achievement of the above average students in both the control groups is higher than the achievement of the students belonging to the other two categories. The average students have established a clear lead over the below average students. At the same time, they have not narrowed down the gap that existed between them and the above average students. It substantiates that the traditional lecture method, as an instructional strategy, could not enable the average and the below average students to cope with the above average students. Nor could it enable all the categories of students to improve upon the pre-test performance to a considerable extent. This is in tune with the findings of Vetriselvi (2012), Mallika (2012) and Maria (1995).

13. There is significant difference in the post-test performance among the various categories of students in both the experimental groups. There
is a clear ranking order among the various categories of students in the experimental groups. The mean gain made by each category of students throws light on the effectiveness of the applied strategy in reaching out to various categories students in the classroom. The uniform mean gain reveals that the applied strategy has been equally effective to all the categories of students. It further indicates that the applied strategy will be viable in inclusive setting also. This is supportive of the findings of Vetriselvi (2012), Mallika (2012) and Marsha (2006).

14. The boys and the girls in each of the control groups and each of the experimental groups are very much alike in their achievement in the post-test performance. Hence there exists no significant difference in the post-test performance between the boys and the girls of the control group and the experimental group in both rural and urban schools. Though the girls are slightly ahead of the boys in terms of mean values, they could not make any marked difference. This table further indicates that the applied instructional strategy i.e. MTLS has been equally effective to the boys and the girls in teaching and learning of English at secondary level in both rural and urban settings. It supports the findings of Mallika (2012) and Iqbal (2012)

15. There is significant difference in the level of awareness of teachers and students about MTLS in both control group and experimental group in rural and urban schools between before and after the experiment. There is no significant difference in the level of awareness of teachers and students of all the control groups between before and after the experiment. On the other hand, the level of awareness of teachers and students have increased to a considerable extent after the experimental treatment. The significant difference in the levels of awareness can be ascribed to the effectiveness of the applied strategy. This also vouches for the advantage of the MTLS over the TLM. This finding is in tune with the findings of Kamali (2011)
16. There is significant difference in the performance of the experimental group students in both the rural and urban schools between the pre-test and the post-test while there is no such significant difference in the performance of the control group students in both rural and urban schools between the pre-test and the post-test. It implies that the traditional lecture method could not enable, the control group students in both rural and urban schools to improve upon their pre-test performance. As a result, their progress as well as the rate of progress is not at all significant. On the other hand, the applied strategy i.e. MTLS has enabled the students of both the experimental groups to evince remarkable progress in the post-test achievement. The impressive progress and the rate of progress made by both the experimental groups can be ascribed to the efficacy of the applied strategy i.e. MTLS. The marked difference in the progress as well as the rate of progress substantiates the advantage of MTLS over the traditional lecture method in teaching English at secondary level. Further, this table establishes the viability of the applied strategy in both rural and urban settings. This finding is in accordance with the findings of Susan (2007), Abdelhafex (2006), and Anthony (1999).

17. There is significant difference in the performance of each category of students in the experimental group in both rural and urban schools between the pre-test and the post-test whereas there is no such significant difference in the performance of each category of students in the control group in both rural and urban schools between the pre-test and the post-test. The traditional lecture method, as an instructional strategy, could not enable any category of students to improve upon their pre-test performance. On the other hand, the applied strategy i.e. MTLS has been effective to each category of students in both rural and urban settings. This table establishes the efficacy of the strategy in reaching out to all the learners. The significant difference in the performance of the students between the
control group and the experimental group bears testimony to the advantage of MTLS over the traditional lecture method in teaching English to various categories of students at secondary level. This finding is in tune with the findings of Susan (2007), Abdelhafex (2006), Anthony (1999) and Iqbal (2012).

18. There is no significant difference in the performance of boys and girls in both the control groups between the pre-test and the post-test while there exists significant difference in the performance of boys and girls in both the experimental groups between the pre-test and the post-test. It implies that the traditional lecture method, as an instructional strategy, could not enable the boys and girls in both the control groups to improve upon the pre-test performance. On the other hand, the boys and girls in both the experimental groups have shown a remarkable progress in the post-test. The remarkable progress made by the boys and girls of the experimental groups is ascribable to the efficacy of the applied strategy i.e. MTLS. This table also substantiates the advantage of MTLS as an instructional strategy over the traditional lecture method. It supports the findings of Mallika (2012, Vetriselvi (2012), Iqbal (2012).

19. There is marked difference in the retention test performance between the control group students and the experimental group students in both rural and urban schools. The students of both the experimental groups have made impressive mean gains when compared with their counterparts in both the control groups who received instruction through the traditional lecture method. As in the post-test, the experimental group students have maintained the same degree of difference in the retention test performance also, between them and the control group students. It establishes the efficacy and viability of the applied strategy i.e. MTLS in both rural and urban settings not only in terms of instruction but also in terms of retention. This finding is
similar to the findings of Iqball (2012), Susan (2007) and Antony (1999).

20. There is significant difference in the retention test performance between the control group students and the experimental group students in respect of each category i.e. above average students, average students and below average students in both rural and urban schools. This table establishes that the MTLS strategy has been effective both in term of instruction and retention. A close scan of the t-values indicates that the MTLS strategy has been effective to all the categories of students. Further this analysis substantiates the viability of the applied strategy in both rural and urban settings. It also vouches for the advantage of the applied strategy over the traditional lecture method in terms of retention. It is in accordance with the findings of Mallika (2012), Vetriselvi (2012), Abdelhafez (2006) and Brown (1987).

21. There is no significant difference in the retention test performance between the rural students and the urban students in the control groups in terms of group as a whole and in terms of each category. i.e. above average students, average students, and the below average students. With regard to the experimental groups there is no significant difference in the retention test performance between the rural students and urban students in terms of group as a whole and in respect of above average and below average categories. With regard to the category of average students in experimental groups, there is significant difference in the retention test performance between the rural students and the urban students. The performance of the average students in the urban experimental group is better than the performance of the average students in the rural experimental group. It contradicts the findings of Iqbal (2012), in whose study urban students seem better.
22. There exists no significant difference in the retention test performance between boys and girls in the control group and experimental group in both rural and urban schools. Even though the girls are a little ahead of the boys in terms of mean values in all the four groups, they could not make any significant difference between them and the boys in the retention test performance. At the same time, it is to be noted that this slight variation was found both in the pre-test and post-test. The same pattern is evident in the retention test also. It supports the findings of Mallika (2012) and Iqbal (2012).

23. There is no significant difference in the performance of the students of both the control groups and both the experimental groups between the post-test and the retention test. It shows that the performance of all the groups were almost alike in the post-test as well as in the retention test. It is to be noted that the applied strategy i.e. MTLS has enabled the students of both the experimental groups to maintain the post-test progress in the retention test also, without any decline. It establishes the efficacy of the applied strategy in terms of ensuring retention. The MTLS strategy could facilitate the retention of voluminous quantum of the concepts learned during the period of experimentation, even though the retention test was conducted 45 days after the post-test. This table vouches for the effectiveness of applied strategy not only in instruction but also in retention of the learned concepts. This is supportive of the findings of Vetriselvi (2012), Mallika (2012) and Marsha (2006).

24. There is no significant difference in the performance of students of all the groups between the post-test and the retention-test. It indicates that the applied mode of instruction was effective in ensuring retention. All the t-values indicate that the applied mode of instruction could facilitate retention of the concepts learned during the period of experimentation even though the retention-test was conducted 45
days after the post-test. This table vouches for the effectiveness of the applied strategies not only in instruction but also in retention of the learnt concepts. This finding is in accordance with the findings of Susan (2007), Abdelhafex (2006), and Anthony (1999).

25. There is no significant difference in the performance of the boys and girls in both the control groups and in both the experimental groups between the post-test and the retention test. It indicates that the traditional lecture method as well as MTLS could not enable the students to improve upon their post-test performance. It is to be noted here that the students of both the control groups could not make any tangible progress in post-test. So they have manifested same level of performance in the pre-test, post-test and retention test. On the other hand, the boys and girls of both the experimental groups have shown a remarkable progress in the post-test and they have maintained the same progress in the retention test. It substantiates that the applied strategy i.e. MTLS is equally effective to both boys and girls not only in terms of instruction but also in terms of retention. It supports the findings of Mallika (2012, Vetriselvi (2012), Iqbal (2012).

6.2 Implications of the Study

A study without far reaching implications cannot be considered a worthy one taking into account the time and labour involved in the process. As far as this study is concerned, the results are expected to bring about far reaching implications to the student population, in general, and to the rural students in particular. The following are certain implications of this study: The results of the study have established that the MTLS treatment in teaching / learning English is more effective than the traditional lecture method to the various categories of students in Std X. So this strategy is viable to be applied in inclusive setting. Teachers of middle schools and high schools handling English can be given orientation as to how to develop MTLS and make use of them effectively in their respective classes.
Since the use of application of MTLS enhances the achievement of the low achievers, it will diminish weightage and stagnation in our schools. So a necessary orientation can be given at DIET level also so that awareness can be developed among primary school teachers, middle school teachers and teachers at the secondary level. Further, MTLS facilitates learning to learn. It enables the learners to account for their own learning. So there is a great need to sensitize the teachers in this regards. The teachers in service should be provided with inservice training and those to be appointed should be provided with preservice training. This will go a long way in refining the teaching learning process.

The findings of the study reveal the need for language experts (who have mastery over the four skills in English) to be appointed at the primary level itself. If not possible at least from the middle school level (i.e. classes VI, VII, and VIII) onwards, such experts should be appointed.

6.3. Limitations of the Study

The limitations of the study are as follows:

i) The study is confined to the students studying in Xth standard at St. Joseph Higher Secondary School, Dindigul and the Xth standard students of S.S.H.N.Hr. Secondary School, Muhavur of Tamil Nadu state.

ii) The sample consists of 60 students at the rate of 30 students for each group and 10 for each category selected on the basis of systematic purposive random sampling technique.

iii) The experiment was conducted for a period of six months at the rate of one hour per day.
iv) As far as this study is concerned various categories of students include above average students, average students and below average students.

v) The achievement test used in the study is a teacher made one with its own validity and reliability.

6.4. Suggestions for the Further Research

1) To ensure more dependable conclusions, the experiment may be conducted on a wide range of schools.

2) The findings of this study can be tested with greater sample through experimental study and the effectiveness of the MTLS can be found out.

3) Likewise, MTLS can be applied at middle school level for classes VI, VII and VIII and the effectiveness of the strategy can be measured.

4) A parallel study can be made to find out the effectiveness of the MTLS treatment with special reference to low achievers, under achievers slow learners, learning disabled etc.

5) A comparative study can be made by selecting students from urban area and rural area.

6) A study can be undertaken to assess the attitudes of the students and the teachers of middle schools and higher secondary schools towards MTLS.

7) A similar study can be carried out in teaching the passive skills at any intended level.

8) A similar experimental study can be undertaken to study and measure the effectiveness of MTLS treatment with reference to normal students and gifted students.

9) MTLS can be applied in teaching of other subjects and its efficacy can be measured with reference to various categories of students.
10) Similar studies can be attempted to verify the efficacy of MTLS in teaching other subjects at secondary level.

11) Studies can be undertaken to establish the relative effectiveness of the MTLS in teaching various subjects at different levels of our educational system.

12) A separate study can be undertaken applying the metacognitive teaching learning strategy to all the students in the classroom and the efficacy of the strategy can be assessed in inclusive setting.

13) Another indepth study can be attempted to analyse and assess the efficacy of the metacognitive teaching learning strategy by making individual comparison and how the strategy has been effective to each one can be assessed.

14) Similar study can be made and the efficacy of metacognitive teaching learning strategy can be analysed and assessed by making use of covariance analysis.