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SUMMARY AND CONCLUSION

In the preceding chapters, introduction to the problem, development of the tools, methods of the study and interpretation of the results were discussed. The present chapter has been devoted to the summary and conclusions of the study. For providing the background of the findings a brief description of the purpose, design and procedure, along with the conclusions and suggestions for further research have been presented in the following paragraphs.

As a result of the tremendous progress of science and technology, the people have to communicate themselves with the external world by using foreign language. English has become a world language. It is the means of international communication. Accordingly, the need for learning language particularly English has, over the last few decades, grown enormously all over the world.

English, an additional language can be learnt at different stages of life; it can be learnt for different purposes, aims and goals with different degrees of proficiency, different motivation and in different socio-cultural context. English as second language is setting importance in almost all over the world.

This influence is most prominent in pronunciation. Now, people are no longer content with acquiring only the reading and writing skills of the language, they want to be able to speak English in the way they are understood not only by the nearby neighbor, but also by the English-knowing foreigners of a distant continent.

Technology is the application of scientific knowledge to the practical tasks of life. If properly employed, technology could make education and learning more productive and powerful more immediate, scientifically based and with equal access to education.

As a result of hardware and software instructional technology, many sophisticated technology oriented methods of instruction have emerged. Audio tape, videotape, CD-ROM, DVDs, television, etc. are the fruits of hardware technology, whereas language learning through language laboratory pertains to software technology. Nowadays educational system throws a challenge to teachers to play a multiple and dynamic role, to keep pace with constantly changing world. Textbooks, teaching methods and context
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become obsolete within a short period of time. Experts in the fields of education are thinking of variety of approaches for teaching to achieve different instructional objectives.

Language is a means of communication, chiefly through the media of speech and writing. People express their thoughts and feelings in a comprehensible manner through language. The human language is a signal system which uses vocal sounds and is based on human’s ability to speak. The written language is secondary, derived from the spoken language. The basis of language is speech which in turn means the production of meaningful sounds according to a system.

Each community is formed by the activity of language. Language and society are so intertwined that it is impossible to understand one without the other. There is no human society that does not depend upon, is not shaped by and does not itself shape language. A.C. Gimson (1980) observed that a language is a system of conventional signals used for communication by a community. Every social institution is maintained by language; law, religion, government, education and the family are all set in place and maintained by the help of language.

In various language learning investigations, strategy instruction led to greater strategy use and self-efficacy (Chamot et al. 1996), anxiety reduction (Johnson 1999), and increased motivation, strategy knowledge and positive attitude (Nunan 1997).

However, linguistics is concerned with the description of speech acts or texts, since only through the study of language in use are all the functions of language, and therefore all components of meaning, brought into focus (Halliday 1970).

Teaching pronunciation includes teaching the articulation of sound segments of a language, focusing attention on aspects of pronunciation such as stress, intonation, tonality, and tone in connected speech and cultivating correct rhythmic patterns (Campbell, 1968). Teaching the pronunciation of English means teaching students not only how to speak English better but also to rid themselves of certain gross regional features of pronunciation because these hinder intelligibility of their speech at the national/international level (Leon, 1966).

Pronunciation is of basic importance in language teaching. In spoken English there is no escape from the rudimentary elements of English pronunciation. All of us learn pronunciations of words largely through imitation (Gimson, 1986). The view that
intelligible pronunciation is an essential component of communicative competence (Morley, 1991), is generally accepted, and with it the necessity of teaching pronunciation on the segmental and suprasegmental levels.

Besides, the structure of the sound system of a language also involves stress and intonation which are super the super-segmental features. Stress functions within a word with one or more syllables having heavier stress and at phrase or sentence level with one or more words stressed more heavily than others. The function of intonation is to convey attitudinal or emotional meaning and is very closely associated with the context of an utterance.

Stress has been described as the relative loudness or the degree of force applied on different syllables, intonation, on the other hand, is the change of pitch of the voice. It may be called the ‘melody’ or the ‘tune’ of speech. It is apparent that this tune or intonation, like phoneme and stress, is a feature of meaning in speech, for the same word or a group of words will carry different meanings when said with different tunes.

In order to enable the learners to learn to the best of their capacities, language learning through language laboratory is a powerful approach to provide good opportunities for students to experience success. The language laboratory is one of the prominent example of an instructional system in which the machine components paved the way for an entirely different learning environment. Its development represents vivid application of the combined properties of systems analysis, task analysis, and cybernetic principles in the educational setting. Before the language laboratory became common place, the classroom teacher served as the model for foreign speech in a classroom of 25 to 30 students who were trying to reproduce speech sounds. The individual in such a situation might have a maximum of one minute of speech practice per classroom session, hardly enough to produce fluency and accuracy.

The modern language laboratory has between ten or twenty booths, each equipped with a tape deck, headphones, microphone and now computers. The technology is organized in such a way that students can work on their own, can be paired or grouped with other students, or can interact (though their headphones and microphones) on a one-to-one basis with the teacher. The teacher can broadcast the same taped (or filmed) material to each booth, or can have different students or groups of students work with
different materials. Student can interact with each other, and written texts can be sent to computer screen.

Learning a foreign language requires that the student hears vocabulary and speech patterns repeatedly. The exercises are carefully sequenced and are followed by new combinations of varying complexity. The ultimate goal is to have the student readily comprehend what he or she hears and make immediate and appropriate responses. From the student’s viewpoint, the language laboratory serves as a base for extensive practicing of finely sequenced behavior, matching aural models, and developing speech fluency. From the instructor’s viewpoint, it provides the facilities (hardware and software) for a more effective language-learning situation.

In addition, the widespread availability of audiotape, videotape, CD-ROMs, DVDs and internet downloads of sound and video files has vastly increased potential input material for language learning. Consequently, selection of the most appropriate input, chunking the input into manageable and useful segments, developing supports material (particularly for self-access learning) and training of learners in the best uses of this input is ever more important (Benson and Voller 1997).

However, one important consequence of successful language learning through Language Laboratory is students’ obtaining a greater sense of English Self efficacy. Skill development has a direct effect on academic performance and on children’s beliefs of their academic efficacy. Perceived efficacy exerts a more substantial impact on academic performance, both directly by affecting quality of thinking and good use of acquired cognitive skills and indirectly by heightening persistence in the search for solutions.

Efficacy beliefs plays an influential mediational role in academic attainment. The extent to which such factors as level of cognitive ability, prior educational preparation and attainment, gender, and attitude towards academic activities influence academic performances, is partly dependent on how much they affect efficacy beliefs. The more they alter efficacy beliefs, the greater the impact they have on academic attainments. The unique contribution of beliefs of cognitive efficacy to academic performances is highly replicable in analyses of the direct and mediated effects between these diverse types of determinants (Hackett, 1985; Pajares & Kranzler, 1995; Pajares & Miller, 1994a; Pajares, Urdan, & Dixon, 1995; Randhawa, Beamer, & Lundberg, 1993).
In addition, key elements of quality learning relate to the students' perceptions of quality teaching which in turn influences their approach to study and ultimately learning outcome. Approach to learning can be described as the relationship between the student and a learning task. This process is not static state but is dynamic and changes as the situation changes.

Marton, Entwistle, and Hounsell (1984) have concentrated on the approaches during normal study activities that the approaches to learning and studying which students adopt in their every day work can be described in terms of the deep and surface distinction. A deep approach to learning is compared with David Ausbel’s idea of a meaningful learning set. The students set out with the intention actively to seek out the meaning and to reconstruct a personal understanding of the article. In contrast, a surface approach is narrowly focused on the details. The students concentrate on rote learning techniques to reproduce aspects of article about which they expect.

The learners use the new material to actively reconstruct their conceptual frameworks. The process also involves seeking personal meaning in the material and active engagement with it. Intrinsic motivation an be expected to lead for the most part towards deep processing strategies.

Surface processing is characterized by memorizing and by limiting the domain of activity. Its focus tends to be on completion of the task with minimum conceptual effort. The task may be seen as externally imposed and to be accomplished as expeditiously as possible with mechanical activities. Extrinsic motivation may promote more surface approaches, as part of effort to meet requirements.

So, the present study was undertaken with a view to investigate the effectiveness of Learning Language Laboratory on Language Performance as compared to Conventional Method in relation to English Self efficacy and Learning Approaches.

**STATEMENT OF THE PROBLEM**

LANGUAGE LEARNING THROUGH LANGUAGE LABORATORY IN RELATION TO SELF-EFFICACY AND LEARNING APPROACHES OF TECHNICAL COLLEGE STUDENTS IN THAILAND
♦ DELIMITATIONS
The scope of the study has been delimited with respect to the details given below:
1. The study will be conducted in the Technical College of Department of Vocational Education [DOVE] in Thailand.
2. Some basic concepts of English grammar from the content study, will be applied to the students of Diploma level.
3. These students study English as their second language.

♦ OBJECTIVES OF THE STUDY
The study was undertaken with the following objectives;
• To develop Language Laboratory Learning Packages based on curricular specifications of Thai students in the Technical college of Department of Vocational Education (DOVE) in Thailand.
• To study the effectiveness of Learning through Language Laboratory on Language Performance as compared to Conventional Method.
• To study the effect of English Self efficacy on Language Learning through Language Laboratory.
• To study the effect of Language Laboratory Interaction on Language Performance of technical college students with Deep and Surface Learning Approaches.
• To study interactive effect of English Self efficacy, Learning Approaches and Language Laboratory. Interactions on Language Performance.

♦ HYPOTHESES
The study has been designed to test the following hypotheses:
Ho.1: Language Laboratory and Conventional Group Learning yield equal gain means for Total scores.
Ho.2: The different levels of English Self efficacy result into equal level of earning outcomes as measured by gain means of Total scores.
Ho.3: There is no difference in gain means of Total scores for students with Deep and Surface Approaches.
Ho.4: The effect of High and Low English Self efficacy does not qualify the Total scores through Language Laboratory and Conventional Group Learning.

Ho.5: Gain means for Total scores of students with Deep and Surface Learning Approaches are not different while learning through Language Laboratory or Conventional Group Learning.

Ho.6: Gain means for Total scores of students with High and Low English Self efficacy are not different Deep and Surface Learning Approaches.

Ho.7: Language Laboratory and Conventional Group Learning yield comparable gain means of Total scores for High and Low English Self efficacy groups with Deep and Surface Learning Approaches.

Ho.8: Language Laboratory and Conventional Group Learning yield comparable gain scores for stress on words.

Ho.9: The different levels of English Self efficacy result into equal level of Learning outcomes as measured by gain scores of stress on words.

Ho.10: There is no difference in gain mean scores of stress on words for students with Deep and Surface Learning Approaches.

Ho.11: The effect of High and Low English Self efficacy does not qualify the scores of stress through Language Laboratory and Conventional Group Learning.

Ho.12: Gain mean scores for stress on words for students with Deep and Surface Learning Approaches are not different while learning through Language Laboratory or Conventional Group Learning.

Ho.13: Gain mean scores for stress on words of students with High and Low English Self efficacy are not different while learning with Deep and Surface Learning Approaches.

Ho.14: Language Laboratory and Conventional Group Learning yield comparable gain mean scores of stress on words of High and Low English Self efficacy groups with Deep and Surface Learning Approaches.
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Ho.15: Language Laboratory and Conventional Learning Groups yield comparable gain scores for rhythm in words.

Ho.16: The different levels of English Self efficacy result into equal level of learning outcomes as measured by gain scores of rhythm.

Ho.17: There is no difference in gain mean scores of rhythm in words for students with Deep and Surface learning approaches.

Ho.18: The effect of High and Low English Self efficacy does not qualify the gain scores of rhythm in words through Language Laboratory and Conventional Group Learning.

Ho.19: Gain mean scores for rhythm in words of students with Deep and Surface Learning Approaches are not different while learning through Language Laboratory and Conventional Group Learning.

Ho.20: Gain mean scores for rhythm in words of students with High and Low English Self efficacy are not different while learning through Deep and Surface Learning Approaches.

Ho.21: Language Laboratory and Conventional Group Learning yield comparable gain mean scores of rhythm in words, for High and Low English Self efficacy groups with Deep and Surface Learning Approaches.

Ho.22: Language Laboratory and Conventional Group Learning yield comparable gain scores for intonation on words.

Ho.23: The different levels of English Self efficacy result into equal level of learning outcomes as measured by gain scores of intonation on words.

Ho.24: There is no difference in gain mean scores of intonation on words for students with Deep and Surface Learning Approaches.

Ho.25: The effect of High and Low English Self efficacy does not qualify the gain scores of intonation on words through Language Laboratory and Conventional Group Learning.

Ho.26: Gain mean scores for intonation on words for students with Deep and Surface Learning Approaches are not different while learning through Language Laboratory or Conventional Group Learning.
Ho.27: Gain mean scores for intonation on words for students with High and Low English Self efficacy are not different while learning with Deep and Surface Learning Approaches.

Ho.28: Language Laboratory and Conventional Group Learning yield comparable gain mean scores of intonation on words for High and Low English Self efficacy groups with Deep and Surface Learning Approaches.

♦ TOOLS

The following tools were used for the purpose of data collection:

♦ AN INSTRUCTIONAL PACKAGE FOR LEARNING THROUGH LANGUAGE LABORATORY: for the students in diploma level pertaining to their particular vocabulary required and their deficiencies in pronunciation for word accent, rhythm and intonation. The package was developed by the investigator. The instructional package consists of:
  - A Prerequisite Skills Test
  - Specification of Terminal Behaviour and a summative criterion test
  - Instructional Sequences, which run into ten units especially designed to be administered through Language Laboratory. Instrument and Process of Remediation have also been included. The details of the development and validation of this tool have been described in chapter II.

♦ A set of Unit Formative Criterion Test: For each of the 10 instructional units a formative criterion test was developed by the investigator. The tests were distributed over three sections of content including i) word accent ii) accent and rhythm iii) intonation.

♦ The criterion test was used as posttest of each instructional unit. Preparation and validation of the criterion test were discussed in chapter II.

♦ REVISED TWO FACTOR STUDY PROCESS QUESTIONNAIRES (R-SPQ-2F) Developed and Standardized by Biggs, J. 2001: This tool was used to identify Deep and Surface Learning Approaches.
the students did not fulfil the condition of entry behaviour, they were provided orientation before entering into the instructional programme. At least one week was spent on this exercise.

♦ PHASE II: ADMINISTRATION OF THE PRETEST CRITERION TEST, AND CLASSIFICATION INSTRUMENTS.

Before starting with the Instructional Programme, all the students of selected groups were given Pre-test, the Criterion test. Space for answers was provided with the questions. One hour and a half was given to complete the tests. Scoring was done to obtain the information regarding pre-treatment knowledge of the students on the selected content. This was repeated in all the four selected colleges before implementing the treatment.

During this phase, English Self efficacy Scale was administered to all the students of the total sample, from four technical colleges. Separate answer sheets were provided for this purpose. The students were given one period time of 30-45 minutes to give their responses. The response sheets were collected after each student had filled it up. The investigator herself monitored this process. The response sheets were scored according to the prescribed scoring keys. These scores were later used to classify students.

The third tool, the questionnaire of revised two-factor Study Process was administered to identify Deep Learning Approach students and Surface Learning Approach students. The scores arrived at, after scoring against prescribed keys, were used and students were categorized according to their Learning Approaches.

Although the students were identified on both these variables but instructional treatment was imparted on intact groups chosen in each college, because of administrative problems.

♦ PHASE III: IMPLEMENTING INSTRUCTIONAL PROGRAMME

According to the objectives of the study, four technical colleges in industrial area and in the central part of Thailand were selected randomly. For the experiment, the students were classified on the basis of learning approaches and self-efficacy and then were divided into two groups, the experimental & control group. The experimental group learnt through language laboratory while the control group was taught through conventional strategy. Each group of about 30-40 students took at least 10 instructional
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units, in a language lab. The process was repeated four times in two colleges since the administration did not allow to split the classes for language lab study. So instructional treatment was imparted to 200 students within intact group selection plan and were classified for the purpose of analysis at the later stage. This kind of grouping not only helped the college administration but also left a feeling that all the students are being taught together without any discriminations.

Ten Instructional Sequences were prepared and validated by the investigator as explained in chapter II. Content for pronunciation was selected around stress on words, rhythm on words and intonation. The instruction treatment was administered according to the following steps.

Step I: The students were informed of the objectives of each lesson. The investigator also informed the rules required to use Language Laboratory. The lesson used listening and speaking skills.

Step II: • Presentation: For presenting new information of unit I, the investigator used model lessons on audio-cassettes from the instructor’s central panel console. The investigator broadcast all the instructions through a microphone which was connected to all the 40 booths. One student sat in one booth with his earphones. Each booth was connected to ‘Console’ and made a two-way connection between the teacher and the student. The students heard the vocabulary/sentences and their speech patterns repeatedly through their headphones.

• Practice: After listening to the audio cassettes the students practised in speaking the dialogues and text. They asked questions through their microphones which the teacher (investigator) answered from the central panel. There was a scope of one to one interaction also when the teacher connected to only one booth. However, for common directions she spoke to all the students which each one of them could hear through his/her earphones.

• Production Test: The students constructed and produced their oral responses in groups and then an individual pronunciation was sought from all the learners one by one and also by writing on the production test which was developed as additional exercises,
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similar to the already presented content. At this stage the students interacted through their
headphones and microphones on a one-to-one basis with the teacher.

- **Feed back:** The teacher checked the individual responses and gave direct feed
back for the deficient responses. She also provided feed-back correctives in the form of
remediations: These were repetitive exercises in which similar words/sentences were used.

- **Review:** The teacher summarised and reviewed the lessons.

**Step III:** A Unit Formative Test was administered in written form (Appendixes 2 ii) to all
the students and the responses were collected orally also by the teacher at her central
panel. In fact these responses were recorded in each booth and were analysed by the
teacher, later.

**Step IV:** After ensuring learning on unit I, the students were presented with unit II. The
cycle of Presentation, Practise, Production, Feed back, Review, Formative Test was
repeated and the investigator completed all the ten instructional units. Since at a time 30-
40 students were administered instructional plan, so the investigator worked with two
sections in one college simultaneously, in two different periods. The total time of
implementing treatment was around four months, and then in another college two groups
were administered instructional treatment simultaneously.

- **PHASE IV:** The pre-testing of Control Group students was done according to the
time schedule of experimental group. This group as chosen from two other colleges
selected as control group. However the respective teachers of these two colleges were
requested to teach the same content in a conventional way. The post test was administered
by the investigator herself.

- **PHASE V:** The responses of all the students were scored according to prescribed
scoring keys of Pre-tests English Self efficacy Scale, Learning approach Questionnaire and
the Post-Tests. The scores thus obtained were subjected to statistical analyze.

- **STATISTICAL TECHNIQUES:**

According to the nature and complexity of the study to test the various
hypotheses based on the objectives of the study, different statistical treatment was needed.
The techniques are mentioned below:

- Mean and Standard Deviations were used whenever required.
• Graphical Analysis/presentations were done through Bar Graphs, Frequency Polygons.
• Three way analysis of variance for 2x2x2 factorial design was used for analysis of data pertaining to effect of language learning through language laboratory on English performance:
• Each significant F-ratio was followed by T-test.

♦ MAJOR FINDINGS

In the light of the analyses and the interpretation of the results of the present study, the following conclusions were drawn:

♦ PART A: PERFORMANCE CRITERION

♦ CONCLUSIONS DRAWN ON THE BASIS OF CRITERION SCORES

• For Total Scores :
  • Whereas approximately 75% of the treatment group taught through Language Laboratory attained 71 % or more marks, the same percentage of Control Group students attained 61.5 % or more marks.
  • About 50% of the treatment group taught through Language Laboratory attained 77.5 % or more marks, the same percentage of Control Group students attained 67% or more marks.
  • About 25% of the treatment group taught through Language Laboratory attained 85 % or more marks, the same percentage of Control Group students attained 76.5% or more marks.

• For Scores of Stress on Words :
  • Whereas approximately 75% of the treatment group taught through Language Laboratory attained 71.5 % or more marks, the same percentage of Control Group students attained 63.5 % or more marks.
  • About 50% of the treatment group taught through Language Laboratory attained 78 % or more marks, the same percentage of Control Group students attained 72.5% or more marks.
  • About 25% of the treatment group taught through Language Laboratory attained 845 % or more marks, the same percentage of Control Group students attained 82% or more marks.
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- **For Scores of Rhythm in Words:**
  - Whereas approximately 75% of the treatment group taught through Language Laboratory attained 54.5% or more marks, the same percentage of Control Group students attained 46.5% or more marks.
  - About 50% of the treatment group taught through Language Laboratory attained 73.5% or more marks, the same percentage of Control Group students attained 65.5% or more marks.
  - About 25% of the treatment group taught through Language Laboratory attained 92.5% or more marks, the same percentage of Control Group students attained 84% or more marks.

- **For Scores of Intonation on Words:**
  - Whereas approximately 75% of the treatment group taught through Language Laboratory attained 78.5% or more marks, the same percentage of Control Group students attained 55.5% or more marks.
  - About 50% of the treatment group taught through Language Laboratory attained 89.5% or more marks, the same percentage of Control Group students attained 71.5% or more marks.
  - About 25% of the treatment group taught through Language Laboratory attained 98% or more marks, the same percentage of Control Group students attained 84.5% or more marks.

**PART B:**

♦ **CONCLUSIONS DRAWN FROM COMPARATIVE ANALYSIS THROUGH GAIN MEAN SCORES**

Gain mean scores for instructional Strategies, Language Laboratory versus Conventional Group Learning, the gains were reportedly higher on Total Scores for students learning through Language Lab as compared to their counterparts of Conventional Group Learning.

The gain mean scores of Intonation variations were higher for Language Lab group as compared to those of Conventional Group.
The gain mean scores of Stress on Words variations were higher for Language Lab group as compared to those of Conventional Group.

The total gain mean of high English Self efficacy was found to be lower (27.88) as compared to that of Low English Self efficacy group. Although there did not seem to be a significant difference in gain means yet no or an inverse relationship could be observed between English English Self efficacy and Stress, Rhythm and Intonation.

Gain mean of Total scores and scores of Stress, Rhythm were found to be higher for Deep Approach Students as compared to those of Surface Approach Students.

In case of Intonation Surface Approach Students did better than the Deep Approach Students.

- **CONCLUSIONS DRAWN ON THE BASIS OF 2X2X2 ANOVA ON TOTAL GAIN SCORES:**
  - Learning English through Language Lab leads to higher total scores of students as compared to that of Conventional Group Learning.
  - The High and Low level of English Self efficacy resulted in almost equal gain means of total scores, for language learning.
  - The students with Deep and Surface learning approaches scored equal levels of learning outcomes as measured by gain means of total scores.
  - The two factors viz Instruction Strategies and English Self efficacy do not interact with each other to yield different gain means of total scores.
  - The Instructional Strategies and Learning Approaches operated independent of each other, not to yield different learning outcomes.
  - The level of English Self efficacy and types of Learning Approaches operated independent of each other and thus no significant differences were found in the total gain scores.
  - For gain mean of total scores, the three variables under study were independent of each other.
• CONCLUSIONS DRAWN ON THE BASIS OF 2X2X2 ANOVA ON SCORES OF STRESS ON WORDS:

  • Language Laboratory yielded higher gain mean score for stress on words than those of Conventional Group Learning.
  • The High and Low level of English Self efficacy resulted in almost equal gain mean scores of stress on words.
  • The students with Deep and Surface Learning Approaches scored equal levels of learning outcomes as measured by gain means of stress on words.
  • The two factors viz Instruction Strategies and English Self efficacy do not interact with each other to yield different gain means of stress on words.
  • The Instructional Strategies and Learning Approaches operated independent of each other, as far as scores on stress were concerned.
  • The level of English Self efficacy and types of Learning Approaches operated independent of each other to yield equal levels of learning outcomes as measured by scores of stress on words.
  • For gain mean of scores for stress on words, the three variables under study were independent of each other.

• CONCLUSIONS DRAWN ON THE BASIS OF 2X2X2 ANOVA ON SCORES OF RHYTHM IN WORDS:

  • The gain mean scores of rhythm in words are not different for two groups of students learning through Language Laboratory and Conventional Group Learning.
  • The High English Self efficacy group yielded higher gain mean scores for rhythm in words than Low English Self efficacy group.
  • The students with Deep and Surface learning approaches scored equal levels of learning outcomes as measured by gain means of rhythm in words.
  • The two factors viz Instruction Strategies and English Self efficacy do not interact with each other to yield different gain means of rhythm in words.
  • The Instructional Strategies and Learning Approaches operated independent of each other, in relation to gain scores of rhythm.
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• The level of English Self efficacy and types of Learning Approaches operated independent of each other to yield equal levels of learning outcomes as measured by scores of rhythm in words.
  - For gain mean of scores for rhythm in words, the three variables under study were independent of each other.

• CONCLUSIONS DRAWN ON THE BASIS OF 2X2X2 ANOVA ON SCORES OF INTONATION VARIATIONS IN WORDS:
  - Learning English through Language Laboratory leads to higher gain mean for intonation on words as compared to that of Conventional Group Learning.
  - The Low English Self efficacy group yielded higher gain mean scores for intonation on words than High English Self efficacy group.
  - The students with Deep and Surface learning approaches scored equal levels of learning outcomes as measured by gain mean scores of intonation on words.
  - The two factors viz Instructional Strategies and English Self efficacy do not interact with each other to yield different gain mean scores of intonation on words.
  - The Instructional Strategies and Learning Approaches operated independent of each other, for intonation variation scores.
  - The level of English Self efficacy and types of Learning Approaches operated independent of each other, resulting into equal levels of learning outcomes.
    - For the gain mean scores of intonation on words, the three variables; Learning approaches, English Self efficacy and Instructional Strategies do interact to yield differences in gain mean scores of intonation on words:
      • Through Language Laboratory, High English Self efficacy students with Deep Approach were found superior than their counterparts with Surface Approach.
      • Through Language Laboratory, Deep Approach students of High English Self efficacy showed higher gain means on intonation as compared to their counterparts of Deep Approach but Low English Self efficacy.
      • Through Language Laboratory, Low English Self efficacy students with Deep Approach and those with Surface Approach did not differ significantly on intonation scores.
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- Through Language Laboratory, Surface Approach students of High English Self-efficacy group, was not found significantly different from Low English Self-efficacy, Surface Approach students.
- Through Conventional learning, Deep learning Approach students with High English Self-efficacy was not found different from Surface Approach, High English Self-efficacy group.
- Through Conventional learning, Low English Self-efficacy students with Deep Approach and Low English Self-efficacy group with Surface Approach were not found to differ on intonation gain means.
- Through Conventional learning, Deep Approach group of High English Self-efficacy was not found to be significant on intonation gain means as compared to their counterparts of Low English Self-efficacy group.
- Through Conventional learning, Surface Approach students with High English Self-efficacy, was not found different from Surface Approach students with Low English Self-efficacy.
- With High English Self-efficacy, Deep Approach students learning through Language Lab were not found to be different on intonation gain means scores as compared to Deep Approach students who were learning through Conventional Group Learning.
- With High English Self-efficacy, Surface Approach students working in Language Lab were found to outshine the High English Self-efficacy, Surface Approach students.
- With Low English Self-efficacy, Intonation gain mean scores of Deep Approach students learning through Language Lab were found to be significantly superior to those of Deep Approach students working in Conventional group Learning situation.
- With Low English Self-efficacy, Intonation gain mean scores of Deep Approach students learning through Language Lab scored significantly higher than those of Surface Approach students learning through Conventional Group Learning.
EDUCATIONAL IMPLICATIONS OF THE RESULTS:

The results of the present study indicate that Language Learning through Language Laboratory may be used to enhance the performance of the students in the subject of English at the diploma level as compared to the conventional method of teaching. It is evident from these results that if the teachers switch over to this strategy, learning outcomes and academic performance of the students can improve. Language Learning through Language Laboratory was found more effective as compared to Conventional Group Learning. It may be suggested that teachers should be given orientation in the development of instructional material as regards to higher educational technology in the form of study guides, which will help them deal effectively with heterogeneous groups.

In the present study, Language Learning through Language Laboratory was found more effective as compared to Conventional Group Learning for English performance in Total Scores, for scores of Stress on Words, and for scores of Intonation variations Words. Whereas for the scores of Rhythm in words, CGL was found more effective as compared to LL group since the context for the students to practice repeatedly, get feedback and again repeat the words in case of rhythm may be difficult. It may be due to the fact that words in present study perhaps are composed of various patterns to memorize. Therefore, the students sometimes got confused and were not able to apply those patterns properly English being their second language. In additional, some students in CGL had more experience in spoken English so they used their experience in stead of the context in the lab.

The effect of English Self efficacy on English Performance suggests that High English Self efficacy group is better than the Low English Self efficacy group in Rhythm in Words Scores and Intonation on Words Scores whereas both groups resulted in almost equal gain mean scores in Total Scores and Stress on Words Scores.

However, Learning Approaches, do not seem to differentially affect the attainments through Language Learning in Language Laboratory. Deep Learning Approach students and Surface Learning Approach students are almost equal in every aspects of English Performance of learning through Language Laboratory and Conventional Group Learning; Total Scores, Scores of Stress on Words, Scores of Rhythm in Words and Scores of Intonation Words.
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Surprisingly, for gain mean scores of Intonation on Words, the three variables; Learning Approaches, English Self efficacy and Instructional Strategies do interact to yield differences in gain mean scores of Intonation on Words. Through Language Laboratory, High English Self efficacy students with Deep Approach were found superior over their counterparts with Surface Approach and Deep Approach students of High English Self efficacy showed higher gain means on intonation as compared to their counterparts of Deep Approach but Low English Self efficacy.

The study seems to have a direct implication for language teachers that language labs be utilised for learning Stress patterns, Rhythm and Intonation Variations. Language Laboratories can be usefully utilised for learning speech patterns in general and Stress and Intonation in general. However for Rhythm the two groups were not different. Hence Rhythm may be better practised in a conventional way.

SUGGESTIONS FOR FURTHER STUDY

The investigator is quite aware of the limitations under which the present research was conducted and therefore accepts that no sweeping generalizations could be made. These findings are only indicative of trends and hence are to be viewed in the light of following limitations.

- The sample of the students was drawn mainly from the technical colleges.
- The sample was limited only to the urban and industrial areas.
- The study was limited to only diploma level of technical college students rather than on any normal group of students.
- The variables studied were limited to learning through Language Laboratory, English Self efficacy and Learning Approach.
- Study was conducted on both boys and girls.
- Achievement was viewed as performance in English Language only.

The researcher, by virtue of her experience in the field of the study humbly offers the following suggestion for further research that could be undertaken by the prospective researchers.
Effectiveness of Language Learning through Language Laboratory may be researched at a large scale for learners of different age groups, ability levels, socio-economic status.

- Further studies may be conducted to see the effect of learner self-access and autonomy and concurrently, the need for good support materials. A wide variety of speech samples—such as electronic dictionaries, encyclopedias and sound files on CD-ROM, DVD and the internet is available for teaching input. Also, advances in computerised speech synthesis, speech enhancement and speech recognition have led to the development of sophisticated software for interactive pronunciation learning with visual feedback. Such rich variety of input, therefore, affects the teacher’s role, with a potential shift from acting as an informant to being instructor or speech coach. The implications of the research in these areas will influence the formulation of learning priority and targets and appropriate methodology responsive to the needs of the learners.

- Studies may be undertaken to investigate the effect of different components viz. Perseverance, aptitude, cognitive style, different mode of feedback or alternate material in relation to Language Laboratory strategy.

- Meta-analysis of the studies in respect of Language Laboratory strategy be conducted.

- The present study may also be replicated on a larger population for greater validation of results.

- The present study may be planned and conducted by involving more organismic and environmental variables. English Self-efficacy may be studied elaborately for speech patterns especially for lower classes.

- Some experimental studies can be planned and conducted to study language background and parental interactions and their impact on the competencies of the learners in learning through language laboratory. Home and family correlates of language learning may be focused and their achievements be implicated through Language Lab.

- The further research may be conducted on effectiveness of the innovative strategies in Language Laboratory e.g. by using software in phonetics, individualised situations, small groups etc.