CHAPTER V

FINDINGS AND CONCLUSION

5.0 Introduction

This chapter provides an overview of the research study with an explanation of the findings resulting from the analyses of data, with reference to each of the research hypothesis that guided the study and other significant findings of the study. The chapter also summarizes the limitations and achievements of the study and makes suggestions for further research.

5.1 Overview of the Study

In an effort to enhance communication skills of the UG level ESL learners using digital language lab, a multimedia program was designed, developed, and administered. The study was a one group pre-test post-test experimental research design. The purpose of the present study was to establish the effect of the multimedia materials on communication skills of the students at the UG level. A simple random sampling was impracticable for data collection in order to test hypotheses. Therefore, for the present study a group of First Year Arts and Commerce students of Sardar Patel University who took 12th board examination of Gujarat State Higher Secondary Education Board, Gandhinagar with English as one of the subjects was selected following random cluster sampling techniques. A total of twenty students participated
in the experiment. Out of these, eight were female and twelve were male; ten students had passed the 12\textsuperscript{th} board examination in Commerce stream and ten in Arts stream. The mother tongue of all participants was Gujarati. They study English as a Second Language with Gujarati as medium of instruction at various schools. Ten of them had scored above 50 marks in English at 12\textsuperscript{th} standard level. Nine participants’ annual family income was above one lakh and eleven participants’ family income was below 1 lakh per year. Thus, the sample, that is, the participants for the present study were controlled in the sense that they belonged to an intact group and had similar linguistic and educational background. The multimedia package was tried out in the Digital English Language Lab of H M Patel Institute of English Training & Research, V V Nagar. A pre-test was administered in the beginning of the programme. The tryout was followed by a post test, a self evaluation checklist to measure attitudinal differences and feedback questionnaire to evaluate the materials.

5.2 Major findings

The major findings of the study could be established through the rejection of the null hypotheses that guided the study. The study was guided by the following null hypothesis.
i. There will be no significant difference in the overall mean scores of the pre-test and post-test of the students.

ii. There will be no significant difference in the mean scores of the pre-test and post-test of the students in terms of gender.

iii. There will be no significant difference in the mean scores of the pre-test and post-test of the students in terms of the discipline opted for at higher secondary level.

iv. There will be no significant difference in the mean scores of the pre-test and post-test of the students in terms of their achievement in English at 12th standard level.

v. There will be no significant difference in the mean scores of the pre-test and post-test of the students in terms of SES.

vi. There will be no significant difference in the mean scores of the pre-test and post-test of the students in various language skills covered in the programme.

The findings derived through the rejection of the null hypothesis also aim to answer some of the research questions set out by the study.

5.2.1 Difference in the overall mean scores of the pre-test and the post-test to establish the effectiveness of the programme

The first null hypothesis that there will be no significant difference in the mean scores of the pre-test and post-test of the students was rejected
answering the first research question on potential of digital language lab to enhance communication skills. The results from the analysis of the pre-test and the post-test scores established that there was a significant difference between the overall mean scores. A T-analysis was carried out to obtain details of overall differences in the pre-test and post-test scores. The T-value obtained from the analysis of the overall mean scores of the pre-test and the post-test was 11.271. The mean of the paired difference was 5.10 with standard deviation 2.024. The details also revealed that the P-value or value of significance was 0.000, at the level of 0.05. The analysis showed that there was a significant difference between the overall mean scores of the pre-test and post-test at 5% level of significance rejecting the first null hypothesis as an answer to the first research question. The difference in the mean scores at 5% level suggested that the difference was not due to chance but because of the materials tried out. However, it should be noted that the pre-test and the post-test covered two out of three skills targeted: listening and reading. Speaking was assessed through a qualitative measurement. Hence, it could be established that the multimedia package has been effective in enhancing listening and reading skills of the students at undergraduate level using digital language laboratory.
5.2.2 The difference in the mean scores of the pre-test and the post-test in respect to the gender, discipline of the study at the higher secondary level, achievement in 12th standard and Socio-economic status of the participants

a. Gender

In order to get the difference between the pre-test and post-test in relation to gender, Levene’s Test for Equality of Variances was applied. The analysis revealed that the difference in the mean scores of the pre-test and the post-test of Female participants was 5.13. The difference in the mean scores of Male participants was 5.08. The P-value or the significance value corresponding to the F-test of equal variances assumed was 0.081 which is less than 0.05. To confirm the difference a two sample T-test with unequal variance was carried out. The P-value of t-test with unequal variance was 0.965, which was greater than 0.05. This meant that there was no significance difference in mean score of pre-test and post-test with respect to gender at 5% level of significance. As a result, it could be concluded that the multimedia package has been equally effective on male and female participants.
b. Discipline of the study (Arts/Commerce) at higher secondary level

In respect to the discipline of the study at higher secondary level, the data analysis showed that there was a mean difference of 5.70 and standard deviation of 1.829 between the score of post-test and pre-test of Arts’ students. The mean difference in the scores of post-test and pre-test of Commerce students was 4.50 with standard deviation 2.121. The P-value or the significance value corresponding to the T-test of equal variances assumed was 0.456 which was greater than 0.05. Thus the null hypothesis was accepted concluding that the multimedia package has been equally effective on the students belonging to the arts and commerce streams.

c. Achievement of the participants in 12th standard

As stated in 4. …. the undergraduate participants passed a qualifying exam to join the arts and commerce stream of the higher education. The data analysis carried out to find out the effectiveness of the multimedia programme on the students of the two different streams revealed that there was no significant difference in the performance of high and low achievers at 12th standard. This finding opens a new door for investigation into the validity and reliability of 12th standard board exam of Gujarat State Higher Secondary Board in English as Second Language.
d. Socio-economic status

Some of the impacts of socio-economic status on the learners are opportunities to education both school level and higher education, access to various sources of additional language input like print and audio-visual media in addition to the prescribed textbooks and the atmosphere needed for motivation to learn. The analysis of the data collected in respect to the socio-economic conditions of the participants established that there was no difference in the participants’ achievement. The analysis showed that there was a mean difference of 5.09 and standard deviation of 1.973 between the scores of pre-test and post-test of the subjects whose family income is upto 1 Lakh. The mean difference in the scores of pre-test and post-test of the students with above 1 Lakh family income was 5.11 with standard deviation of 2.205. The P-value or the significance value corresponding to the F-test of equal variances assumed was 0.905 which was greater than 0.05. The P-value significance of the T-test was 0.983 which is greater than 0.05. Hence, it could be concluded that the multimedia materials had similar and equal effect on the participants irrespective of their socio-economic status.

e. Language Skills

The multimedia materials were targeted to develop listening, speaking and reading skills. The listening and reading skills were tested through the pre-test and post-test while speaking was assessed through recorded informal
conversations/interviews with the participants. A paired sample T-test analysis was carried out to determine the effect of the multimedia package on listening and reading skill.

The analysis showed that the difference in the mean of the scores in listening skill covered in the pre-test and post-test was 4.50. To confirm the significance of the difference, a T-analysis was carried out. The T-value obtained from the analysis of the mean scores of the pre-test and the post-test of listening skill was 12.049. The mean of the paired difference was 4.50 with standard deviation 1.670. The details also revealed that the P-value or value of significance is 0.000, at the level of 0.05. The analysis showed that there was a significant difference between the mean scores of the pre-test and post-test of listening skill at 5% level of significance rejecting the null hypothesis: *There will be no significant difference in the mean scores of the pre-test and post test of listening skill.* The significance at 5% level also suggests that the difference in the mean scores of the pre-test and post-test of listening skills was due to the effect of the materials and not by chance. Hence, it could be concluded that the multimedia materials have been effective in developing listening skills.

However, the null hypothesis: *There will be no significant difference in the mean scores of the pre-test and post test of reading skill* was
accepted and it could be concluded that the multimedia materials need improvements in inputs of reading skills.

5.3 Findings derived from qualitative analysis

a. Speaking skill

One of the objectives of the study was to investigate the effect of the materials on speaking skills in addition to listening and reading. A qualitative analysis was carried out to assess the difference in the pre-test and post-test performance in speaking skills. A set of criteria to assess speaking skills was used to assess the performance in speaking. The analysis showed that 80% of the participants were at A1 proficiency level in the pre-test. 10% participants were at 0 level and 5% each at A2+ and B2+ level each in the pre-test. As compared to that there were 30% participants at A1+ and A2 level each. 20% participants were there in A1 level and 10% each in A2+ and B1 level. There was no one at 0 level in the post test. Thus, the null hypothesis on difference difference in the mean scores of pre-test and post-test of speaking skill was rejected. This helped in determining that the multimedia materials have been effective in developing speaking skill in addition to listening skill.
b. Self evaluation checklist

To measure the attitudinal changes that a short term programme may bring a self evaluation checklist consisting 20 “Can do” statements was administered at the beginning and at the end of the programme. The checklist was developed from communicative objectives defined by the British Council on the basis of CEFR proficiency indicators. The participants responded to a three point scale: Always, Sometimes and Not sure on a list of “Can do” statements. The analysis of the data collected from the self-evaluation checklist indicated positive attitudinal changes among the participants. The 13% responses to Always in the pre-test resulted into 39% at the end of the programme. The difference of 26% helped in establishing that the confidence and motivation to learn English has been elevated significantly. This conclusion was also supported by 37% decrease in the responses to Not sure.

c. Feedback questionnaire

In addition to the pre-test, the post-test that measured the effectiveness of the multi-media materials’ package in terms of the enhancement of language skills, a questionnaire for feedback on the multimedia materials was also administered to evaluate the package. The analysis of the data collected through feedback questionnaire showed overall agreement of the students to the ease of accessing computer based tasks to learn the language. The ease
of access was supported by the participants agreement to the clarity of instructions. However, a significant number of participants expressed their scepticism about navigation between slides while taking computer based tasks. Although 50% participants agreed and 30% strongly agreed, there may be a scope for improvement in the navigation between the slides. In addition to this, 15% participants couldn’t make their mind about the relevance of the context used with the real life situations. However, 50% strongly agreed and 50% agreed to the point that the samples of language were useful in day to day life.

The participants found the multimedia materials interesting with 80% agreement. In responses the questions on significance of grammar and vocabulary in respect to the day to day use, 80% participants showed agreement while 20% expressed that they were Not sure about the same. In terms of time, the multimedia programme received mixed responses. 15% participants disagreed to the adequacy of time to complete computer based tasks and 15% could make up their minds about the same. Thus, the time allotted to each CALL task needs a review considering 30% responses on the negative side.

It was significant to note that 70% participants found that all the skills did not get equal time for practice. The responses correlated with the results of
the quantitative analysis as the programme has been effective in developing listening and speaking skills. The null hypothesis for reading skills was accepted to conclude that the multimedia materials have not been significantly effective in developing reading skills. Thus, the multimedia materials need a balance in terms of time and tasks dedicated to each skill.

The feedback on submitting CALL tasks received a positive response with 60% participants showing agreement to getting immediate feedback. The overall enjoyment of the programme received 100% agreement leading to conclusion that the participant liked the lesson design as combination of CALL, individual, group work and pair work tasks.

5.4 Recommendations and Suggestions for further research

An analysis of the results on the participants’ performance through the test scores suggest that the multimedia materials prepared using authoring tool and delivered through digital English language lab have been effective in enhancing communication skills of ESL learners at the undergraduate level. Moreover, the participants responses to the survey on the materials and lesson design resulted in an overall positive evaluation. The findings suggest that the use of multimedia materials in digital English language lab could prove to be an important factor in language enhancement. Therefore, it is recommended that multimedia packages could be developed to be used in the language laboratories and fit them in a lesson design that is a balance of
computer based tasks and the communicative task using pair work, group work and other language teaching techniques recommended by contemporary approached to teaching of English as a second language. The authoring tools may prove to be a boon to the teachers of English to create an interactive atmosphere essential to second language learning. In addition to this, the language laboratory materials could be designed and structured around the features offered by the authoring tools.

The concept of digital English language lab is slowly emerging in developing countries of the world. India is not an exception. The use of technology in the field of English language learning has grown significantly. However, extensive researched are needed for the optimum meaningful use of the technology available and developed infrastructure. There are many language laboratory software available. These software could be critically evaluated in the light of socio-cultural and constructivist theories of second language learning. The digital language lab software consist of inbuilt materials for the language practice. These materials could be critically evaluated in terms of needs of the learners and context of the language use. There are many open source authoring tools available online. The present research explored the possibilities in using CourLab 2.4 for enhancing communication skills at the UG level. Hence, further researches could be
carried out using Microsoft Learning and many other course creators available for various levels of learners.

5.5 Conclusion

To conclude, the research study was significant in establishing that the multimedia materials provided innovative and creative ways of nurturing student learning potential and enhancement of language skills. As a result, the study advocates the potential of the language laboratory that can definitely be tapped in order to provide new ways of configuring and accessing language learning opportunities.