THE DEVELOPMENT AND EFFICACY OF CALL MATERIALS AT GRADUATION LEVEL IN PAKISTAN

By
Salman ul Waheed
2009-GCUF-1349-233

Thesis submitted in partial fulfillment of
the requirements for the degree of

MASTER OF PHILOSOPHY
IN
LINGUISTICS

DEPARTMENT OF ENGLISH LINGUISTICS
GC UNIVERSITY, FAISALABAD.

February 2012

DECLARATION

The work reported in this thesis was carried out by me under the supervision of Dr. Asim Mahmood, Assistant Professor, Department of Applied Linguistics GC University, Faisalabad, Pakistan.

I hereby declare that the title of the thesis "The Development and Efficacy of CALL Materials at Graduation Level in Pakistan" and the contents of thesis are the product of my own research and no part has been copied from any published source (except the references, standard mathematical or genetic models /equations /formulas /protocols etc). I further declare that this work has not been submitted for award of any other degree /diploma. The University may take action if the information provided is found inaccurate at any stage.

Signature of the Student/Scholar

Registration No. : 2009-GCUF-1349-233

CERTIFICATE BY THE RESEARCH SUPERVISOR

I certify that the contents and form of thesis submitted by

Mr. Salman ul Waheed Registration No 2009-GCUF-1349-233 has been found

satisfactory and in accordance with the prescribed format. I recommend it to be

processed for the evaluation by the External Examiner for the award of degree. I

recommend it to be processed for the evaluation by the External Examiner for the

award of degree.

Signature……………………….

Name: …………………………...

Designation with Stamp:………………………….

Coordinator, Department of English Linguistics

Chairperson, Department of English Linguistics

Dean, Faculty of Management & Administrative Sciences

SUPERVISORY COMMITTEE

<u>Supervisor</u>
Signature…………………..
Name: ………………………
Designation with Stamp……………………….

<u>Co-Supervisor (if any)</u>
Signature…………………..
Name: ………………………
Designation with Stamp……………………….

<u>Member-1</u>
Signature…………………..
Name: ………………………
Designation with Stamp……………………….

<u>Member-2</u>
Signature…………………..
Name: ………………………
Designation with Stamp……………………….

<u>Member-3</u>
Signature…………………..
Name: ………………………
Designation with Stamp……………………….

SCRUTINIZING COMMITTEE

<u>Member-1</u>
Signature…………………..
Name: ………………………
Designation with Stamp……………………….

<u>Member-2</u>
Signature…………………..
Name: ………………………
Designation with Stamp……………………….

<u>Member-3</u>
Signature…………………..
Name: ………………………
Designation with Stamp……………………….

To my parents

TABLE OF CONTENTS

ACKNOWLEDGMENTS

I acknowledge with profound gratitude a great many people who have had constant beliefs in me before and during my studies and my research.

My gratitude is expressed to Dr. Asim Mahmood for being my thesis supervisor. I thank him for his endeavor for my study to touch the acme. I am also grateful for his constant and invaluable support and comments, his patient editing, and the materials he provided me with during the course of my thesis writing.

My very special thanks go to Dr. Zia ul Qayyum, Director UIIT, Arid Agriculture University Rawalpindi, for his dedicated, professional and profound conversant support, which has greatly influenced and impressed me.

I am also thankful to Dr. Rashid Mahmood for his dedicated, professional and profound conversant support, which has greatly inspired me.

I owe my thanks to my friend and brother Mr. Asif Ikram who was a source of continuous inspiration for me.

Finally I wish to acknowledge my respondents for their cooperation during the process of data collection.

3-A, Quaid-e-Azam Road
New North Gulgasht
Multan

Salman-ul-Waheed

SUMMARY

This research encompasses the treatment of English language pedagogy with Computer Assisted Language Learning (CALL) tools at graduation level in Pakistan. The research primarily compares the change in students' language proficiency by using CALL materials and without CALL materials. Change in proficiency in reading and writing skills of a student was the sole end of this inquiry. In order to check the efficacy of CALL environment for the learning of English at Graduation level, the CALL materials were developed. The CALL materials comprised of dramatized videos, machine readable text book, Parts of Speech (POS) tagged lessons, Word frequency lists and exercises developed on Hot Potatoes 6.

Further this research measured the change in motivation level of the learners in two different environments; CALL and Non CALL. The results of the research showed that the application of CALL tools challenges the orthodox and traditional ways of teaching English language in the country.

This research also investigated the liking and disliking of the English teachers for the use of technology in English language teaching. Ten teachers of English language were interviewed by the researcher which unfolded the fears, reservations and affiliations of the teachers for the use of CALL tools. The results of the survey have identified the barriers considered by the teachers in adopting the technologies in English language teaching. The research ends with the discussion whether we should overhaul our current ways of English language pedagogy or to maintain status quo.

To accomplish the primary motive a part of the book of English of graduation class, named "Selection of Modern English Prose" was transformed into CALL material. Dramatized videos were developed while embellishment of the text was done by tagging the text with POS taggers.

For implementation and research, one class was bisected into two. This bisection was fairly carried out by conducting a pre-test. One half was taught with CALL tools by using CALL materials while the other half was facilitated merely with verbal lectures by the teacher. This research was conducted at Govt. Post Graduate College Kot Adu, District Muzaffar Garh from 02 May 2011 to May 24, 2011. Despite teaching in the session, students' motivation level towards CALL environment was also recorded by collecting attendance percentages of both the halves on daily basis. This data was quantitatively analyzed at the end which proved that students who studied with CALL tools were more inclined and motivated towards English learning.

On the other hand, after deliberate teaching to both the halves of the class, students were obliged to sit in a very formal test based on the teachings of the session. Pre and post-test results were compared and analyzed.

The results of the quantitative analysis of the data laid down two major points of conclusion. One states that CALL materials do enhance the marks of the students of English of graduation level. It implies that their reading and writing skills have improved. Further it was explored that Reading and Writing skills of low proficient students got more polished in CALL environment. Secondly, a big change was mapped during the couching session which established that CALL environment boosted the motivation level of students and hence increased their quest for knowledge. It also imparted autonomy to the students.

Finally, it can be stated that CALL methodology can effectively tackle the classroom issues pertaining to performance, attendance, motivation and discipline. CALL tools boost the confidence level of the students by enhancing learner autonomy.

The results of interviews with the teachers proved to be an optimistic sign for implementation of CALL tools at graduation level in the country. Teachers also whole heartedly welcomed the application of CALL methodology at Graduation level and even they demanded the equipment to initiate this method in near future. They strongly urged government to take special measures in the promotion of this methodology especially in facilitating trainings.

INTRODUCTION

This study was an attempt to measure quantitatively the effect of Computer Based Materials (CBMs) on learning capacity and motivation level of the students. The study also tried to find out the say of the teachers regarding the use of CBMs in classroom environment. It is a study at Graduation level. Govt. Post Graduate College Kot Adu was selected as research site and its graduation class was taken up as population. But for teachers, a random population of ten distinguished teachers was interviewed. Student population was bisected into controlled and experimental groups. Experimental group was taught with the help of CBMs and CALL tools. Differences were marked through a post test and after the data analysis it was proved that CALL tools enhance marks gaining capacity of the learners in reading and writing test. They also boost the motivation level of the students.

The interviews taken from ten English teachers added further to this debate that CALL is a beneficial tool for teaching at graduation level. Their reservations and fears about CALL were also identified.

Our language teaching system focuses on reading and writing skills of the learner because only these two skills are evaluated in examinations. So this research has suggested better ways to enhance the learning of these two skills. The primary benefit of this research is the realization that with the use of computer technologies the motivation level, learner's speed of learning and his language proficiency skills of Reading and Writing are enhanced. The CALL materials developed by the researcher himself are guiding materials for not only students but can also be used for teachers' training.

1. 1 Computer Assisted Language Learning (CALL)

In the recent times, computers were taken up for assistance in learning a language when on the one hand, developments in information technologies while on the other, the increasing number of language learners marked the need of these. Both these factors are largely responsible for the emergence of Computer Assisted Language Learning (CALL). In the recent past, tools of English language teaching have been remarkably shaped up for better and fast learning. This induction of technologies in language learning and teaching gave birth to Computer Assisted Language Learning. Levy (1997) defines CALL as "the search for and study of applications of the computer in language teaching and learning" (p.1). Ahmed et. al. (1985) pointed out that CALL arose from the combination of two separate factors: educational needs and technological means. CALL is a relatively new but rapidly evolving academic field which explores the role of Information and communication technologies in language learning and teaching. It is a tool which helps the teachers to facilitate language learning process.

1.2 English Language Situation in Pakistan

English in Pakistan is being learnt as a second language. It is also a second language if used by a non-native speaker where it has been adopted as the official language in their country (Jarvis, 2005, p.218). Jarvis (2005) further added that "Indian or Pakistani users of English would fall into such a category" (p.218). In Pakistan, English language pedagogy has least experienced the use of technologies. It has never been integrated at graduation level.

English is being taught in schools even from primary level. Provinces of Punjab and Sindh had already made English compulsory as a subject for the

students of class one in 1994 and 1995 respectively. Federal Bureau of Statistics in its yearly publication 'Pakistan Yearly Statistical Book 2011' has laid down that, 38,797,000 children was enrolled in 220029 primary schools in 2009-10 of the country. This all simply reflects the emerging importance of English in the country.

1.3 Statement of the Problem

As it has been mentioned earlier that English is the part of syllabi of class one and approximately 39 million children are learning it in their very start of primary education. These students continue this learning of English as a compulsory subject till graduation. In Pakistan, the children learn English as an academic compulsion for twelve years till they step into their graduation class. Now it is time for them to perform on their own. But the question is whether English language learning system in Pakistan after this compulsory study of fourteen years, makes them proficient in any one of the BICS (Basic Interpersonal Communication Skills) or CALP (Cognitive Academic Language Proficiency). The traditional orthodox ways of language teaching are not meeting the needs.

1.4 Hypothesis of the Study

It is hypothesized that the application of CALL environment with the help of CALL tools makes the students proficient in language skills and hence in gaining marks. CALL makes the acquisition of English language possible and enhances the speed of learning due to the higher motivation and autonomy imparted to the learner.

1.5 Research Questions

The purpose of this research was to suggest a better way of English language teaching that could replace the current orthodox ways because of their inefficiency. Therefore, the major research questions were:

1. Does Computer Assisted Language Learning environment enhance the language proficiency skills of reading and writing among the students of graduation class?

2. Does the use of CALL tools enhance the motivation level of the learners towards English language learning?

3. Whether the use of CALL tools help in decreasing the fear of English, prevalent among the students?

4. Will it be relaxing for the teachers to use CALL tools in the classroom?

5. Are there any reservations or fears present in the minds of the teachers for the use of technologies in classroom?

6. Do teachers have adequate skill to operate CALL tools appropriately?

1.6 Objectives of the Research

This research was an attempt to search for the most appropriate, fruitful and inspirational way of teaching English language in Pakistan. The primary objective of the study was to make this realization among the learned society of the country that it is time to consult the most modern ways of language teaching by the use of computers and internet. Following are the objectives of the study:

- To check whether Computer Assisted Language Learning environment enhances the language proficiency skills of reading and writing in the students of graduation class or not.

- To check the efficacy of CALL Materials in enhancing the motivation level of the learners towards English language learning.

- To know whether the use of CALL tools help in decreasing the fear of English, prevalent among the students.

- To know about the views of the teachers about the implementation of CALL tools in the classroom.

- To identify the reservations or fears present in the minds of the teachers for the use of technologies in classroom.

- To check whether teachers have adequate skill to operate CALL tools appropriately.

Another objective of the study was to develop CALL materials for the English of graduation class.

Summarizing all, it can be said that the researcher wished to replace current ways of English language teaching due to their non productivity with the new technology-enhanced language learning environment.

1.7 Significance of the Research

Though this research is confined to graduation level, even then the end beneficiary of this research is the whole English language teaching system of the country. This research is extraordinarily fruitful in expanding the agenda of language teaching from merely English language learning to English language Acquisition. Our language teaching system focuses on reading and writing skills

of the learner because only these two skills are evaluated in examinations. So this research has suggested better ways to enhance the learning of these two skills.

The interviews taken from the ten English teachers add further to this debate that CALL is a beneficial tool for teaching at graduation level. The magnitude of this research encompasses all the concerned stakeholders of the English language system in the country. This makes it more liable and will become more advantageous if implemented at large scale by the machinery of the government.

1.8 Rationale of the study

The exam results of B.A/B.Sc show that the traditional methods of teaching English are not producing the satisfactory results. The latest result announced by Punjab University of B.A/B.Sc on August 17, 2010 settled the passing ratio at merely 28.75 percent. BZU Multan on July 31, 2010 announced the result of B.A/B.Sc examination recording overall pass percentage of 43.04. This situation demands change in the current ways of English language pedagogy.

The following points make a strong reason for undertaking this research.

Firstly, the very critical position of the English learners of Graduation class that is exhibited in annual results of different universities, does constrain the researcher to find out newer ways of English language teaching.

Secondly, the researcher believes that this is all about the fear of English that creates a gap between the learner and the target language. Second language Acquisition needs an environment most similar to the natural

environment of language learning. This natural environment may kill this fear where all the four skills including basic skills of Listening and speaking build an environment which is friendly and appeals to the senses of the learner.

Thirdly, computers and internet are regarded as efficient devices in many other sectors of human life; they may be called the marvels of the modern world. So the question which invoked this research was that, whether the use of information technologies enhances the English language learning capacity of the learners or not and whether it may be called, to some or the other extent, the counterpart of natural environment.

1.9 Research Design

In order to answer the research questions, an empirical research was conducted. As per the need, CALL materials were developed first. Then, graduation class of Govt. Post Graduate College Kot Adu was taken up as sample population. This class was bisected into two groups by a pre test. One was experimental group while other was controlled group. Before the start of couching session, a pre research questionnaire collected the students' views about their learning of English. Afterwards, both the groups were taught for three weeks but in two different environments. Experimental group was kept in CALL environment while Controlled group was taught with traditional classroom method. During the session students' attendances of both the groups were quantitatively marked to observe the differences in their motivation levels. After the end of the couching session, a very formal post test was conducted. The post research test provided the data which answered the primary question of the

study. In the end, a post research feedback questionnaire tried to mark the differences in the attitudes of the students towards CALL environment.

Finally, through formal interviews, ten teachers were asked about their inclination, fears and reservations about CALL environment. These interviews added the say of the teachers who are the important stakeholders of the English language teaching system.

1.10 Delimitations of the Study

1. Student population was collected from Kot Adu, District Muzaffar Garh.

2. The study was conducted in Govt. Post Graduate College for boys Kot Adu.

3. Coaching classes were carried on for 23 days only.

4. Only five chapters of Graduation book "Selection of Modern English Prose" were used for CALL material selection and development.

5. Study sample of teachers' population was collected from four districts; Multan, Karachi, Layyah and Muzaffar Garh.

6. Teachers' population comprised of 90% male and 10% female.

1.11 Structure of the Thesis

Chapter 1 introduces CALL and describes English language situation in Pakistan. Further it points out the problem and lays down research questions after figuring the need, objectives and reasons for undertaking the research. Then it draws the design of the research and finally elaborates the structure of the thesis.

Chapter two reviews the relevant literature in the field.

Chapter three comprises of detailed description of the methodology adopted in this research.

Chapter four gives a scenic detail of the Development of CALL Materials.

Chapter five reports the data analysis in an attempt to provide an answer to the research questions.

Chapter six, finally, summarizes the findings, specifies how these answer the research questions, points out the main limitations of the study and provides suggestions for further research.

Chapter 2

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature in the field of Computer Assisted Language Learning. The chapter begins with a brief history of CALL. Thereafter, the importance of CALL tools is elaborated in reference to English language teachings. Then the development of CALL materials, tools of CALL methodology, attitudes of teachers and students towards CALL have been discussed. In the end the literature inspects the situation of English language teaching in Pakistan. Chapter ends with the conclusion and comments on what had already been done and what is required to be done.

2.2 CALL and its importance in English Language Teaching

Information and Communication Technology (ICT) tools have been involved in the teaching and learning of foreign language (L2) from the beginning of their use in education in 70's (Dettori and Lupi, 2010:2712). This involvement of ICT tools in language learning marked the beginning of a new discipline known as Computer Assisted Language Learning (CALL). The term CALL is used to describe any kind of language learning activity that makes use of computers (Arikan and Khezerlou, 2010: 4006). The definition of CALL, given by Levy (1997) states CALL as "the search for and study of applications of the computer in language teaching and learning" (p.1). These two views do not bring in the concept of other most modern ICT tools in language learning while the definition given by Gamper and Knapp (2002: 331) seems more appropriate. They define

CALL as "a research field which explores the role of computational methods and techniques as well as new media for language learning and teaching" (Gamper and Knapp 2002, p.331). In the recent past, Computer Mediated Communication (CMC) has played a vital role in enhancing the scope of CALL.

Many recent developments in second language acquisition research and theory suggest that computer assisted language learning (CALL), and more specifically, CMC, may be ideal for classroom language instruction, in that it enables language teachers to move such to what is usually quite difficult to stimulate in the average language classroom— a naturalistic environment for language use (Belcher, 1999, p.254). This role of CMC in the field of computer sciences brought internet and hence revolutionized by surpassing all the other tools of communication. The term Computer Based Materials (CBMs) is collectively used to identify the materials used for language learning whether belonging to internet or played through CD/DVD Rom.

One initial study by Underwood (1984) defines and suggests that CALL:

• focuses more on using forms rather than on the forms themselves;

• teaches grammar implicitly rather than explicitly;

• allows and encourages students to generate original utterances rather than just manipulate prefabricated language;

• does not judge and evaluate everything the students do nor reward them with congratulatory messages, lights, or bells;

• avoids telling students they are wrong and is flexible to a variety of student responses;

• uses the target language exclusively and creates an environment in which using the target language feels natural, both on and off the screen; and

• will never try to do anything that a book can do just as well. (p.52)

There is no mention of communication tools at all, while at one stage Underwood (1984) says that "CALL uses the target language exclusively and creates an environment in which using the target language feels natural". It's believed that to build a natural environment one needs to be communicative. The environments attached to mother language acquisition and second language learning; both are different. The one attached to mother language is ideal and is appreciated in the learning of second language. It is highly idealistic to attain this environment for second or foreign language learning. Underwood (1984) has certainly talked about this environment but he missed the larger part, in case he forgot to mention the importance of communication and its tools. We see that the researchers of modern era have tried to purify the definition of CALL by eradicating absurd things and by giving space to the most modern tools of communication. Lee (2000) preaches that CALL methodology

- provides an opportunity to students to learn through experiential learning

- motivates students

- enhances students' achievement

- gives authentic materials for study

- develops greater interaction

- promotes individualization gives independence from a single source of information

- enlarges global understanding. (p.1)

Another definition devised in their publication of 1989 by Hardisty and Windeatt suggests that the term CALL is used by teachers and students to describe the use of computers as part of a language course. This definition can be endorsed in a situation where merely theory is the sole of research despite application. As that era of late 80s was the era of theoretical research on CALL so such definitions appeared which to some extent neglected the presence, importance and mobility of CALL tools. In comparison to above definition here I quote a recent definition laid down by Egbert (2005). He defines CALL as "learners learning language in any context with, through, and around computer technologies (p. 4). This definition purely signifies CALL as an environment that can be developed with the help of CALL tools.

On the basis of the above discussion, the working definition of CALL for this study can be taken as "a set of ICT related hardware and software on which CBMs can be played on for purely language teaching/learning purposes". This set of ICT related hardware and software may include Internet and Mobiles as well.

2.3 Classification and Historical Development of CALL

The classification of CALL is directly associated with the diachronic development of CALL. In order to classify CALL, we must have an over view of the gradual developments in the field of CALL.

The chronological history of CALL is still a matter of debate among researchers. Delcloque (2000) is of the view that CALL's origins and development trace back to the 1960's while Warschauer (2000) ranked the first stage of CALL and named it as Structural or Behaviouristic CALL dated as 1970's-1980's. Bax (2003) disagrees with the summary of the evolutional phases of CALL reproduced by Warschauer (2000). A more thorough historical analysis should surely attempt greater consistency in terms of chronology (p.14).

A modern linguist, Mike Levy (1997) defines CALL as: the search for and study of applications of the computer in language teaching and learning (p.1). As CALL was the direct consequence of the developments in computers so, its shape kept on changing throughout its history after evolution. In the earliest phases of CALL's history, descriptive work did a great deal in establishing the wake up call.

Three phases of progression of CALL have been identified by Warschauer and Healy (1998). Warschauer (2000) gave a tabled description of these three phases: Behavioristic, Communicative and Integrative.

Table 1: Three stages of CALL taken up from Warschauer (2000)

Stage	1970s-1980s: Structural/ Behaviouristic CALL	1980s-1990s: Communicative CALL	21st Century: Integrative CALL
Technology	Mainframe	PCs	Multimedia and Internet
English Teaching Paradigm	GTM and ALM	Communicative Language Teaching	Content-Based, ESP/EAP
View of Language	Structural (a formal structural approach)	Cognitive (a mentally constructed system)	Socio-Cognitive (Developed in social interaction)
Principal use of computers	Drill and Practice	Communicative Exercises	Authentic Discourse
Principal Objective	Accuracy	And Fluency	And Agency

According to Warschauer and Healey (1996)

> The first phase of CALL, conceived in the 1950s and implemented in the 1960s and '70s, was based on behaviorist theories of learning. Programs of this phase were named as "drill and practice". Drill and practice courseware is based on the model of computer as tutor.

This era is marked by initial developments in CALL where the methodology known as 'drill and practice' was implemented. It was believed that language can be learnt more speedily through drill and exercise. The objectives of this methodology were:

- Repeated exposure to the same material is beneficial to learning

- A computer is ideal for carrying out repeated drills, since the machine does not get bored with presenting the same material and since it can provide immediate non-judgmental feedback

- A computer can present such material on an individualized basis, allowing students to proceed at their own pace and freeing up class time for other activities. (p.1)

It was obviously an evolutionary phase of CALL. Drill and practice initiated many projects among them one very important was PLATO. "CALL may be said to have begun with the PLATO (Programmed Logic for Automatic Teaching Operations) Project which was initiated at the University of Illinois in 1960" (Levy 1997, p.13). This system contained a bank of drills of vocabulary and grammar.

Communicative CALL was the name given to the second phase of CALL. According to Warschauer and Healey (1996)

The second phase of CALL was based on the communicative approach to teaching which became prominent in the 1970s and 80s. Proponents of this approach felt that the drill and practice programs of the previous decade did not allow enough authentic communication to be of much value. (p.2)

In the realm of Communicative CALL, the software produced were based on text reconstruction and stimulations. Though it added many advantages to the CALL in consonance with earlier phase of Behavioural CALL but in the end, Communicative CALL was unable to fulfill the expectations of increasingly

globalized world. Here computers were considered as a device which merely invokes the stimuli of the learners. The next stage found the real integration of Computers in language learning.

Research in Integrative CALL began in the mid 1990s and is still underway. It not only integrates computer but also finds ways to integrate many other devices in language teaching. Fotos and Browne (2004 as cited in Al Bureikan 2008, p.28) are of the view that "one of the major feature of integrative CALL is the use of language learning software and CD-Rom which offer self-paced learning opportunities". This integrative approach provides a number of situations helpful and encouraging for the learner. Induction of all the possible ICT devices including multiplatform usage of Internet brought a revolution in the field of CALL. It was a search to impart ultimate autonomy to the learner in learning a language.

This division of the phases of CALL has been disagreed by Bax (2003) for their unclear criteria. Talking about the first phase of CALL, he looks somewhat satisfied. Bax (2003) gives his views as "Behaviouristic CALL is perhaps the most plausible and would attract most agreement. But the other two categories are far less satisfactory" (p.7). His study trisects CALL under the name of following:

i. Restricted CALL
ii. Open CALL
iii. Integrated CALL

According to Bax his term "Restricted CALL" was different from Warschauer and Healey's 'Behaviouristic CALL'". First point of this term is due to the limited nature of all the operations both either on the part of the teacher or on

the part of the learner. Teacher here just monitors the work practiced by the students.

In contrary to "Restricted CALL", "Open CALL" is more concerned with greater involvement of CALL tools in imparting more learning choices to the students. Here teacher is assigned a more active role of facilitator beside motivator. "Open CALL" opened new horizons for the attainment of autonomy for the language learner.

Bax (2003) made clear that "Third one is 'Integrated CALL' (not integrative, as in Warschauer and Healey's formulation)" (p.11). It differs from Integrative CALL in the sense that it gives us a direction for work. This stage stimulated the process of learner autonomy. Table 4 gives the detailed summary of Restricted, Open and Integrated CALL as propounded by Bax.

.

Table 2: Restricted, Open and Integrated CALL adopted from Bax (2003)

Content	Type of Task	Type of student activity	Type of Feedback
Restricted CALL Language System	Closed drills Quizzes	Text reconstruction Answering closed questions Minimal interaction with other students	Correct / Incorrect
Open CALL System and Skills	Simulations Games CMC	Interacting with the computer Occasional interaction with other students	Focus on linguistic skills Open, flexible
Integrated CALL Integrated Language Skills Work, Mixed Skills and System	CMC WP e-mail	Frequent interaction with other students Some interaction with computer through the lesson	Interpreting, Evaluating, Commenting Stimulating Thought

2.4 CALL Methodology

At the end of 20th century, the major concern was diverted from merely justifying the use of computers in language teaching and it started answering how computers can be more effectively used in language teaching. The use of computers in language acquisition is becoming common practice (Laghos and Zaphiris 2005, p.2). Hubbard (1987) believed that it was the era when courseware reviews highlighted technical considerations and language teaching and learning was sidelined for a while. Methodological framework developed by Philips (1985) and Richards and Rodgers (1982) was refined by Hubbard (1987). He assigned more role to the learner, the evaluator, the

19

developer, and the teacher. Development, Evaluation, and Implementation are the three modules presented by Hubbard that constitute his methodology. They are detailed hereafter:.

The first module is termed as development module. Hubbard (1996) asserts:

> Hubbard's development module is comprised of three sections: approach, design, and procedure. In the approach section, linguistic assumptions and learning assumptions are the two principal determining elements. The two fundamental components of the design section are the learner profiles and the syllabus. Finally, the procedure section of the development model contains the elements to be considered in the actual layout of the program that presents the materials. (as cited in Laghos and Zaphiris 2005, p.2)

The second module is known as evaluation module. Hubbard (1996 as cited in Laghos and Zaphiris 2005) describes as:

> The evaluation module is made up of three sections: teacher fit (approach), learner fit (design), and operational description (procedure). This module focuses on pedagogical issues like learning style, teaching approach, and linguistic assumptions. (p.2)

Third one, the implementation module is made up by the areas to be considered for implementation such as accessibility, the flow of a CALL lesson, learner use of courseware, and teacher control (Laghos & Zaphiris, 2005).

The focus of early CALL methodology was formed by Behaviourism, Audio lingual method and PLATO (Programmed Logic for Automatic Teaching Operations). It was largely due to unavailability of workstation computers. The computers available were expensive and huge in size. But with the invention of PC (Personal Computer), new language teaching methods and methodologies came into light. Communicative methods, Task-based approach, The Natural Approach, Multi-syllabus approach are currently used in modern methodology.

2.5 Tools of CALL Methodology

Due to rapid modernization in computer technologies there has been a divergent swift growth in CALL methodology. Newer ways imparted more choice to the linguists for selection of CALL tools. It will be difficult to elaborate all tools here in this review of the literature. A concise but precise introduction of major tools of CALL methodology is given below.

As the most influential invention of modern times computer is used as a key tool in language learning. It performs two main functions; one as a tool and the other as a tutor. Among other supportive tools the one highly fruitful is the "Blogs". Blogs are web logs or journals, posted to a website where they can be seen by anyone (Erben et. al. 2009, p. 136). Blogs help teachers and students in sharing their knowledge.

Recent developments have started using computer games for language teaching purpose. It is highly motivated and interesting for the student. The user has to choose what to do and input the result as text, speech (speech recognition software), or by clicking on options. Based on the input the program branches to resulting situations / gives feed-back (online) .

In order to impart autonomy to the learner it was required to provide the learner a platform where he could evaluate himself after studying. Software named Hot potatoes is an authoring tool that can be used to develop exercises for self evaluation.

Another important web tool is forum which creates an interactive chatting ambience where people can communicate with each other. A message can be posted by any member of the forum and can also be read by the same at any time.

Like games, traditional storytelling method is also being used for language learning tool on internet. It is bit different from traditional storytelling because here computers are used to generate stories and internet is used to share those stories.

2.6 Development and Implementation of CALL Materials / Courseware

With advancements in information technology, there has been a growing interest in the use of computer networks for second language acquisition (Yamada 2009: 820). All the energies of CALL researchers in last few years have been directed towards achieving environment most similar to mother language acquisition for the second language learning through the use of technology-enhanced language learning. Recently, studies of the influence of technology-enhanced instruction on language learning have appeared in growing numbers (Jamieson & Chapelle, 2010; Felps, Bortfeld & Osuna,2009; Dettori & Lupi, 2010; Ana, De-Siqueira & Macario 2009).

The environment provided by installing CALL tools in a class room develops an environment more similar to natural language learning environment. This CALL environment not only enhances students' language proficiency skills but also makes its inhabitants feel like the citizen of 21st century world. The proliferation of educational technology has facilitated the task of tailoring instruction to the individual needs of learners and enabled learners to take greater control of their learning (Gremmo and Riley, 1995: 259). This has been said because CALL environment imparts more liberty to the students in case it provides them direct exposure to listening and speaking skills which are the primary skills. One of the best ways to learn a foreign language is through spoken dialogue with native speakers (Jia 2009: 249). As these primary skills are the soul of mother language environment so in building CALL environment, both the skills are given importance. Communicative CALL of 1990's largely focused on merely reading and writing skills because of unavailability of tools to evaluate listening and speaking skills. However, with the progress of speech recognition technology, a number of CALL systems have been developed which can detect and feed back mispronunciations using speech recognition technology for developing speaking ability (Ohkawa et. al. 2009: 875). Ogata et. al. (2001) believes that "In CALL researchers have recently attracted much interest to language learning based on CMC (Computer Mediated Communication). That is because it is possible for a learner to communicate with a native speaker using a CMC tool in a target language that the learner wants to learn (p.226).

In this age of Integrative CALL, CMC tools are being widely used in language teaching and learning. These tools include internet as the most influential one. The inexpensive and effective communication has been made

23

possible by the internet. CALL has started using it as language learning and teaching device. Richard (1998) was of the view that the advent of computer networks is beginning to radically change the way in which computers are used in foreign language teaching. Since the dawn of 21st century, many language research centers around the globe have developed systems on computers and internet to facilitate language learning. It was a great idea to use this platform for English language teaching. In this regard the most important launch was the Information and Communication Technology for Language Teaching (ICT4LT). This is the most modern shape of CALL. The accuracy of many such systems has been researched out after implementation. These systems include Ville and DEAL (Wik and Hjalmarsson, 2009), CALLJ (Wang et al., 2009), CSIEC (Jia, 2009), Neclle (Ogata et al. 2001), CoCoA (Ogata et al. 2000), AJET and TELL (Yang and Chin, 2007) etc.

According to Zhao (2005 as cited in Reinders and White 2008), CALL materials help

1) by enhancing access efficiency through digital multimedia technologies;

2) by enhancing authenticity using video and the Internet;

3) by enhancing comprehensibility through learner control and multimedia annotations;

4) by providing opportunities for communication (through interactions with the computer and through interactions with remote audiences through the computer);

5) by providing feedback;

6) by offering computer-based grammar checkers and spell checkers;

7) through automatic speech recognition technology; and

8) by tracking and analyzing student errors and behaviors. (p.61)

Kabata et. al. (2005) developed and implemented multimedia courseware for a Japanese Language Program. An evaluation was conducted at the initial implementation stage to measure the success of the project. The results of the evaluation indicated that students and instructors were positive towards the curriculum reform through the implementation of CALL technologies. Many Japanese teachers have been implementing CALL in their individual courses and have experienced success in improving their course materials (Kabata and Yang, 2002; Nagata, 2002). Ting and Tai (2004) designed a multimedia material for English language learners and implemented it in the classroom. Evaluation results proved the success of the program. Breen (2005) developed two successful courseware to teach English in Dublin and successfully implemented them in the classroom. Evaluation results proved the effectiveness of CALL. Chang (2007) developed a 14 weeks courseware, implemented it in the classroom and then compared the results of the pre-test and post-test. The comparison of results was in favour of CALL methodology. Dodigovic (2000) developed her first CALL package, PASSIV. The investigation proved that certain aspects of the software package were beneficial to the learners. Jeng et. al. (2009) developed their

own dynamic video retrieval system (DVRS) which enables students to find real life examples of grammar and vocabulary in use.

2.7 CALL in Pakistan

In Pakistan, though the computers are being used at many levels for language learning especially at primary level but no research has been conducted until now to check the efficacy of CALL Materials. Therefore the researcher was unable to find any study questioning the effectiveness of CALL materials. It is a point worth notable that Higher Education Commission of Pakistan since 2004 has formulated a CALL subcommittee under English Language Teaching Reforms (ELTR) Project.

2.7.1 English Language Teaching at Graduation Level in Pakistan

Status of English language has always been a matter of dispute among several segments of society in Pakistan. Before partition in 1947, it was presumed that the end of the British Government would result in the slow but sure demise of English in South Asia. This, of course, has not happened so far (Shah: 2007, p.1). With the passage of time English gradually attained a repute of a language of educated people. Feeling the need of English three provincial governments have obliged the education system to teach English even from class one. Provinces of Punjab and Sindh had already made English compulsory as a subject for the students of class one in 1994 and 1995 respectively. Federal Bureau of Statistics in its yearly publication 'Pakistan Yearly Statistical Book 2011' has laid down that, 38,797,000 children was enrolled in 220029 primary

schools in 2009-10 of the country. This all simply reflects the emerging importance of English in the country.

In social environment a Pakistani youngster has to learn English to get higher education and job at national and international level. Despite this importance of the learning English, a great number of Pakistani students could not get through their exam especially at Graduation level. The exam results of B.A/B.Sc show that the traditional methods of teaching English are not producing the satisfactory results. The latest results of Graduation class by various universities have been discussed in the rationale of the study given on page 6.

2.7.2 Current Situation of CALL in Pakistan

Feeling the need, Government of Pakistan through the platform of Higher Education Commission planned to launch a reform program. According to Khattak et. al. (2010)

> Higher Education Commission (HEC) of Pakistan launched a project on English Language Teaching Reforms (ELTR) for bringing qualitative improvement in English Language Teaching and for building capacity for effective and sustainable development of English language teachers in higher education in the country in July 2004. (p.3)

The ELTR project was divided into six subcommittees which are clear in figure 1 given below.

Figure 1: ELTR Subcommittees Source: ELTR Project

According to HEC report (2005), the objectives of this subcommittee are:

1) to provide training courses and workshops to ensure that teachers and students are computer literate and can access and make use of computers for language learning/teaching.

2) to evaluate the success of the program for on-going improvements and replication in selected higher education institutions.

3) to facilitate the provision of Self Access Centers (SAC) with computers and internet facilities in model Departments/Centers in higher education institutions.

4) to develop on-line ELT teacher training courses in conjunction with the subcommittee on teacher training.

5) to provide access to distance/on-line language learning and testing via authentic language learning websites in coordination with the sub-committees on curriculum development and testing. (p.3)

HEC report (2005-07) shows that CALL subcommittee has trained 107 language teachers from public/private sector institutions of higher education from 12 cities and trained 13 master trainers in Integrative CALL.

But it is to conclude regretfully that this program (ELTR) couldn't do miracles due to the lack of funds in 2009. In a preliminary survey from teachers the researcher found that there was a lack of basic knowledge of CALL among the teachers. The number of teachers to be trained should be increased so that a general awareness about CALL is approached.

Chapter 3

RESEARCH METHODOLOGY

This chapter describes research methodology followed in the study in detail. It begins with restating the purpose of the research and research questions. Then, the logic of the development and display of CALL materials has been logically presented. Further, this chapter unfolds research site and then describes the sample population. Finally, after the elaboration of the details of implementation in class room, the method of data collection has been given.

3.1 Introduction

The purpose of this study is to find out the best solution in order to replace the current inefficient ways of English language teaching. Computer Assisted Language Learning tools have been checked out to measure their efficacy in comparison to the orthodox white board lecturing method.

In order to answers the research questions, first, a selection of the most apposite method of research was made. A comprehensive analysis of different approaches and methods gave the justification to the method adopted in this study.

Lasen-Freeman and Long (1991) have described twofold methodology. They say that either "Longitudinal" or "cross-sectional" approaches can be adopted. Longitudinal way follows qualitative analysis and collects data from participants over a period of time. While on the other hand, "cross-sectional" approach towards research studies evaluates data quantitatively and the data is collected at a given time. Larsen-Freeman and Long gave a thorough description

of these two but they did not mention any such approach which lied in between them.

They label the following methods from being more qualitative to being more quantitative: introspection, participant observation, non participant observation, focused description, pre-experimental, quasi-experimental and experimental.

Cohen et. al. (2007) first separate styles of research from the methods of research and then elaborate eight different style of research. According to them following are the major styles of research that are being adopted by the researchers:

1.   Naturalistic and ethnographic research

2.   Historical and documentary research

3.   Surveys, longitudinal, cross-sectional and trend studies

4.   Internet-based research and computer usage

5.   Case studies

6.   Ex post fecto research

7.   Experiments, quasi-experiments, single case research and meta-analysis

8.   Action research

They believe that notion of fitness of purpose must be met by not merely adopting a single methodology but a combination of methodologies should be adopted. We do not advocate slavish adherence to a single methodology in research; indeed combining methodologies may be appropriate for the research in hand (Cohen et. al. 2007: 165).

Duff (2002) believes that fundamentally there are only two types of research which are the broader categories: quantitative and qualitative. Duff (2002) further asserted that both these types must be mingled and combined to get justifiable results. The following quote describes these two approaches:

It is true that the positive approach (quantitative approach) with its goal of discerning the statistical regularities of behavior is oriented toward counting the occurrences and measuring the extent of the behaviors being studied. By contrast, the interpretive (qualitative) approach, with its goal of understanding the social world from the viewpoint of the actors within it, is oriented toward detailed description of the actors' cognitive and symbolic actions, that is, the meaning associated with observable behaviors (Wildemuth 1993: 451).

Finally, keeping in view my research questions and data and population, I combined both the approaches i.e., quantitative and qualitative. Data were collected through pre and post research questionnaires and pre and post research tests from a restricted number of populations of students of graduation class while interviews were used as tool to collect data from teachers.

3.2 Selection of Research Site

The answering of research question demanded practical implementation of the CBMs in class environment.

To inquire the change in language proficiency level of the student and to check his motivation level, researcher selected Govt. Post Graduate College Kot Adu in District Muzaffar Garh as the research site. It is obviously a less developed region of southern Punjab.

To answer questions belonging to the say of the teachers, ten English teachers were interviewed. The research population to answer this question was selected from Multan, Muzaffar Garh, Karachi, Layyah.

3.3 Description of Sample Population

In this section, I describe each group of population individually and provide rationale for selecting each group as sample study

3.3.1 Students of Graduation

All the participants of this group belonged to the research site given above to answer the primary question number 1 and 2. The objective of the study was to draw a conclusion whether Computer Based Materials enhance the reading and writing skills of the students or not. Further it was to be investigated that whether CBMs boost the motivation level of students or not.

To answer both the issues related to the students, the graduation class of 3rd year of Govt. Post Graduate College Kot Adu was selected as research population. The class contained more than hundred students. Twenty four students were randomly taken to build up a research class. This research class was further bisected into two groups. This bisection was fair and based on equilibrium maintained by a pre-research test. The two groups were as follows

Serial No	Name of Group	Number of Students
1	Experimental Group	12
2	Controlled Group	12

Table 1

Hence total number of students, who comprised the research population in answering first two primary questions, was twenty four.

3.3.2 Teachers of Graduation

To answer another primary question related to the saying of the teachers about pros and cons merits demerits and difficulties attached to the use of CBMs, ten very distinguished teachers were selected for interviewing. These interviews were based on the questionnaire developed by the researcher.

Following are the personal information on each subject:

1.   Teacher A

Teacher A was a male, 45 years. He had a master's degree in English and had been teaching English for 18 years in a Govt. Post graduate college as Associate Professor.

2.   Teacher B

Teacher B was a male, 35 years. He had a master's degree in English and had been teaching English for 10 years in a Govt. Post graduate college. At the time of interview he was an Assistant Professor.

3.   Teacher C

Teacher C was a male, 38 years. He had a master's degree in English and had been teaching English for 13 years in a Govt. Post graduate college. At the time of interview he was an Assistant Professor.

4.   Teacher D

Teacher D was a male, 39 years. He had a master's degree in English and had been teaching English for 16 years in a Govt. Post graduate college. At the time of interview he was an Associate Professor.

5.   Teacher E

Teacher E was a male, 26 years. He had a master's degree in English and had been teaching English for two years in a Govt. Pakistan Air Force college. At the time of interview he was an Education officer.

6.   Teacher F

Teacher F was a male, 30 years. He had a master's degree in linguistics and had been teaching English for four years in Bahauddin Zakariya University Multan. At the time of interview he was a lecturer.

7.   Teacher G

Teacher G was a male, 38 years. He had a master's degree in English and had been teaching English for 11 years in a renowned private college.

8.   Teacher H

Teacher H was a male, 31 years. He had a master's degree in English and had been teaching English for two years in University of Education Lahore, Multan campus. At the time of interview he was a lecturer.

9.   Teacher I

Teacher I was a female, 35 years. He had a master's degree in English and had been teaching English for 7 years in a renowned private college.

10.   Teacher J

Teacher J was a male, 27 years. He had a master's degree in English and had been teaching English for 6 years in a renowned private college.

The following table shows the specifications of the research population. All the population mentioned in 'table 3'represents the permanent government employees while those belonging to private institutions are given in 'table 4'

Sr. No	Designation	City	Sample (number)	University/ College
1	Associate Professors	Multan	1	Govt. Emerson College, Multan
		Multan	1	Govt. Science College, Multan
2	Assistant Professors	Layyah	1	Govt. College of Information Technology Layyah
		Kot Adu	1	Govt. Post Graduate College Kot Adu
3	Lecturers	Multan	1	University of Education Lahore, Multan Campus
		Multan	1	BZ University Multan
4	Education Officers (PAF)	Karachi	1	Korangi Air Base Karachi

Table 3

'Table 4' identifies the research population belonging to private institutions

Sr. No	Designation	City	Sample (number)	University/ College
1	Lecturer	Multan	1	SKANS School of Accountancy Multan
2	Lecturer	Multan	1	Leadership College Multan
3	Lecturer	Muzaffar Garh	1	Misali Higher Secondary School

Table 4

3.4 Construction of the Instruments

3.4.1. Instruments of Data Collection from the Students

On the part of the data collected from the students, researcher used four instruments for data collection

    i. A pre-research Test

    ii. A pre-research questionnaire

    iii. A post-research Test

    iv. A post-research questionnaire

    v. Class Observation

i. Pre-Research Test

As it has been earlier mentioned that the research population, representing students, was bisected into two groups: Experimental and Controlled. Experimental group was kept in CALL environment and was taught with the CBMs developed. Twenty four research participants were randomly selected out of the total class of 130 students registered in Graduate class at Govt. Post Graduate College Kot Adu. In order to maintain a fair and just bisection of these twenty four randomly selected students, a test was initially conducted. The results of the test have been analyzed in chapter five, titled 'Data Analysis'.

ii. Pre-Research Questionnaire

Pre-Research questionnaire was an attempt to know the pre-knowledge of the students about the induction of technologies in English language learning.

Pre-research questionnaire contained 16 questions. Both the questionnaires (pre-research and post-research) started with some stating purpose of the questionnaire. This was followed by a brief description of the research project that ended with an instruction for respondent. All the items included were close-ended and the respondents were to check/tick one of the appropriate option. The questionnaire consisted of three sets of questions where each carried its own point of inquisitiveness.

• First four questions inquired the respondent about the method being adopted by his teacher and his knowledge of CALL.

• In next few questions, students were informed about the attendance percentage of their class in routine schedule which was 56% in the lecture of English. For instance in one question, they were asked for the reason of their low attendance and the options were:

(a) Lack of Motivation

(b) Fear of English

(c) Personal Problems

(d) Incompetent teacher

(e) Both a and b

Further it was asked from the student whether the usage of computer technology will be beneficial for his learning of reading and writing skills

• Final set of questions wished to predict the influence of CBMs on the attitudes of the students even before their implementation. It asked them about the reservations and fears present in their minds for the application of CBMs in English language learning. Finally students were asked about their personal choice in selection of the environment in the class.

iii. Post-Research Test

CBMs were implemented in Experimental group of the population for three weeks while Controlled group was taught by orthodox whiteboard lecturing method.

The experimental group was kept in CALL environment for three weeks while Controlled group was taught in an environment where not a single CALL tool was present. In the end of the couching session comprising of three weeks (02-05-11 to 24-05-11), both the groups were obliged to sit in a very formal test. The marking of this post-research test was the source of data whose analysis provided answer for the first question of the study. The deliberate and thorough comparison of the results of both the groups laid down the conclusion. In order to maintain impartial and fair marking of the test, an associate professor of Govt. Post Graduate Emerson College Bosan Road Multan, with ten year experience of marking college and university papers, was hired.

iv. A Post-Research Questionnaire

A post research questionnaire was developed to identify the difference of opinion before and after the implementation of the CBMs. This questionnaire may be called a feedback questionnaire. This was basically a quest to take students' final words based on their experience during the couching session. Considering the difference of the nature of couching sessions provided separately to Controlled group and Experimental group, researcher developed this post-research feedback questionnaire in two parts. First part of sixteen questions was only for the Experimental group while second part, having seventeen questions,

was only for the Controlled group. Both the parts of the questionnaire has been thoroughly discusses and analyzed in chapter five of Data Analysis.

v. Class Observation

One very important question related to the study was to find out the level of increase or decrease in the motivation of the students. The question was:

- Does the use of CALL tools enhance the motivation level of the learners towards English language learning?

A. Daily Attendance Sheet of the Students

It was quantitatively measured whether Experimental group shows more inclination towards English language learning or Controlled group. In simple words, the CBMs were tested for their capacity of enhancing motivation and interest among students for English language learning. The same population with same setting of two different environments was again the focal point in answering this question. During the couching session, despite continuous teaching, the researcher simultaneously marked daily attendance of both groups.

This attendance sheet provided the data whose analysis answered the concerned question. Suggesting no cushion for biasness, this typical question was measured quantitatively. Data received from this method has been analyzed in next chapter.

3.4.2. Instruments of Data Collection from the Teachers

After covering all the possible questions and their answers needed to establish the efficacy of CBMs on the part of students' attitude and their learning capacity of Reading and Writing skills, another landmark search was to add the

say of the teachers; their reservations, their liking disliking, their comfort, their capacity towards the use of CBMs etc. In any education system of the world, teachers are assigned a key role and are regarded as main stakeholders of the system. This research, after establishing the efficacy of CBMs on students' performance, considered it a compulsory obligation to conduct interview of the teachers in order to project what they think about CALL, CALL Tools, CALL Materials etc.

i. Interviews

The specification of the population of teachers that was interviewed has already been discussed in detail on previous pages.

The questions asked in the interview were same for all ten teachers. As per the nature of the interviews, most of the questions were open ended. It provided the teachers an environment where they could say bluntly whatever they pleased. The interviews were conducted in English language. Each interview lasted between 15 and 20 minutes. The interviews were semi-structured and were based on the questions given in the Appendix C at page 164.

All the interviews were recorded digitally in MPEG video format and were later transcribed for further analysis. Then these transcripts were deductively analyzed according to the pre-determined similar categories found in the questionnaire namely:

I. The Present Situation and the Knowledge of CALL

II. Gaps and Short-comings

III. CALL as Solvent?

IV. Reservations about CALL

3.5 Administration of the Instruments

In this section, I will explain the method of data collection; label the time frame for administering the questionnaires and interviews. Further the type of data will also be given in the second half of this section.

On the one hand, the study was basically an attempt to measure quantitatively the effect of CBMs on learning capacity and motivation level of the students while on the other it tried to find out the say of the teachers regarding the use of CBMs in classroom environment. Graduation level was selected as the sole population to answer the concerned questions related to check out the efficacy of CALL materials. Govt. Post Graduate College Kot Adu was selected as research site and its graduation class was taken up as soul population. But for teachers, a random population of ten distinguished teachers was interviewed.

3.6 Method of Data Collection

3.6.1 Students as Population

It was a warm Friday morning of 29th April 2011 when the researcher reached his selected research site to get formal allowance from the principal of the college. It was fairly allowed and the same day researcher was permitted to brief the graduation class of 3rd year about the research. Hence 2nd May Monday was selected for the holding of Pre-research test and commencement of classes.

Another issue for the implementation of CALL materials was the unavailability of CALL tools. Though there are computer labs in most of the government colleges but they don't have the facility of multimedia. To develop an ideal CALL environment, researcher preferred to arrange a projector. On the day of the commencement of classes, before starting his travel towards his research

site, the researcher hired a multimedia on the cost of 1500 per day for one week by paying 10,000 as security and 5000 as advance charges from PC World Multan. On the day, out of the total class of 130, only 24 students were selected randomly. To bisect the class into Experimental group and Controlled group, first of all a pre-test was arranged. The total marks of the test were 25. After this test, students were requested to fill the pre-research questionnaire. The construction and rationale of this questionnaire has already been discussed on the previous pages. The filling of this questionnaire by the students generated data which was finally analyzed by comparing with the same kind of data collected from post-research feedback questionnaire. This comparison was essential in case it marked the change in students' attitude before and after the use of CBMs.

Further, the pre-test was marked by the researcher himself and in effect, class was bisected on the basis of the results. Experimental group was kept in CALL environment and was taught through CBMs for three weeks. The same but published material was taught through black-board lecturing to the Controlled group in the same time period exactly without a single interference from ICTs. This practice was continued till Monday 23rd May in which five lessons were taught. On May 24, students were obliged to sit in a very formal post-research test. The questions asked were based on the inquiry of reading comprehension and writing composition as per the pattern of Bahauddin Zakariya University exam papers. There were total five questions comprising of 50 marks. Considering the importance of fair marking of the papers, an associate professor having ten years experience in conducting and marking annual papers belonging to Govt. Emerson College Multan was hired and requested to mark the papers.

This fair and impartial marking generated the data that has been analyzed in chapter 'five'.

During this couching of three weeks, simultaneously another type of data was collected to answer one of the basic questions of this study. This was based on class observation. It was to be mapped whether students feel themselves motivated in CALL environment OR in Non CALL environment. Leaving no impact of biasness, the method adopted for collecting data was quantitative. Students' daily attendance was taken up for their mouth organ, speaking about their motivation and interest. Hence, despite providing couching to both Experimental and Controlled group, their attendances were also marked. The data fetched through marking attendance has been analyzed in fifth chapter named 'Data Analysis'.

3.6.2 Teachers as Population

After establishing the efficacy of CALL materials, it was firmly recommended by the supervisor of this research that the research will not be over until the say of another very important stakeholder of the education system is not included. As the researcher was in Multan after completing the analysis of the data collected from the students, he decided to discuss the results of the analyzed data with the teachers.

First of all a questionnaire was developed. The composition of the questionnaire and its rationale has been laid down on previous pages. Questions were by nature open-ended hence they initiated a deliberate discussion from the side of the interviewee. Despite the questions, researcher also continually informed the respective teacher with the results of the research conducted earlier

to check out the efficacy of CALL materials. Their already established inferences about CALL were also brought into question. It tried to establish whether the inferences of the teachers about their earlier use of technology endorse the results of this research or not.

3.6.3 Type of Data Collected

In this section, I have provided information related to the type of data collected. It is basically a mixed research where both quantitative and qualitative data entry. But due to higher proportion of Quantitative data, the study may be referred as Mixed Quantitative Research. The data maintained from the two groups of students were quantitative. This was done in order to eradicate any influence from or by the researcher.

The data collected from the teachers was based on open-ended questions asked in formal interviews. This data was analyzed qualitatively. These responses to open-ended questions were analyzed by reviewing responses, grouping related responses and identifying common themes.

3.7 Methodological Issues and the Development of CALL Materials

Researcher was to face a methodological issue while planning this research. No CALL materials of Graduation English were available for implementation in the class. In order to check their efficacy the researcher was to develop CALL materials. Five randomly selected chapters of the English book of Graduation "Selection of Modern English Prose" were dramatized. Another issue was the selection of the software to be used for the development of CALL

Materials. Ulead Video Studio 11 Plus was preferred due to its vast bank of tools. This Development of CALL Materials for the Graduation class has been discussed in detail in the next chapter.

Chapter 4

THE DEVELOPMENT OF CALL MATERIALS

4.1 Introduction

Any material which needs the assistance of Computers for language learning and teaching purposes is called Computer Assisted Language Learning Material. Another name given to CALL materials is Computer Based Materials (CBMs). CBMs for language teaching and learning can be viewed as the software applications within the field of Computer Assisted Language Learning (CALL) (Figura and Jarvis 2007: 449). The phrase, 'software applications' has been further defined by Javris (2004) as CBMs which are ''Language specific as well as more generic Information Technology (IT) programmes'' (p.116). CBMs in general and web-based CBMs in particular for language learning can provide learners with a range of authentic and pedagogical materials (Figura and Jarvis 2007: 449).

Before discussing further, I re-state the purpose of the study and the primary research question for which the CBMs were developed. This study is a quest to know the change in students' language proficiency skills of reading and writing with, and without CBMs. Level of Graduation was selected to map this change but as it was pioneer study in the country, there were no such benchmark standards present in case of CBMs. The researcher himself had to develop and implement CALL materials in order to answer his research questions. A set of CBMs was developed which are labeled henceforth:

4.2 Dramatized Videos of the lessons

4.3 Machine read-able text book (pdf, doc, docx, rtf)

4.4 Encarta World English Dictionary 2009

4.5 Word Frequency lists

4.6 Parts of Speech (POS) Tagging by MACHINESE

4.7 POS tagging by UCREL CLAWS 7 tagset

4.8 Multiple Choice Questions Exercises developed on Hot Potatoes 6

4.2 Dramatized Videos of the Lessons

Due to the rapid developments of media technology, large numbers of videos now are stored in digital format (Jeng et. al., 2009: 5674). Videos have been increasingly been used to serve the needs of EFL learners (Chen et. al. 2005). Being a major component of CBMs, dramatized videos were developed by the researcher. Ulead Videostudio 11 was used to synthesize the MPEG Video materials. The visuals were accompanied by the tracking sound and the bottom line text in order to engage students, simultaneously in watching, listening and reading the same stuff from their course book.

Figure 2

Figure 2 shows a clip taken from Lesson No. 1 'The Rationale of Pakistan'. The bottom line text is also displayed here.

4.3 Machine Read-able Text book (pdf, doc, docx, rtf)

The course book of graduation class was scanned and converted into four different formats (pdf, doc, docx and rich text format) for making the reading available on the computer.
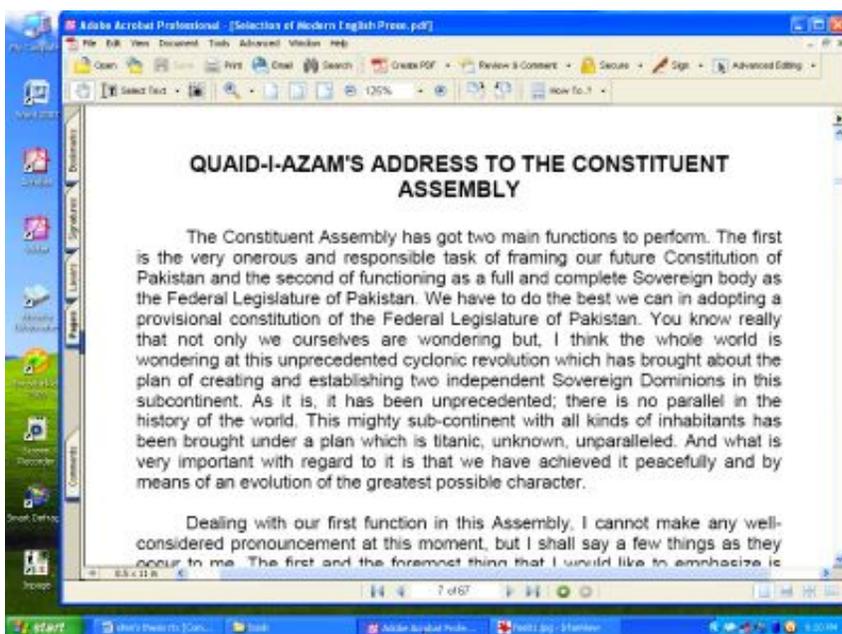
Figure 3

Figure 3 gives a clear view of the text while lesson No. 1 is in the view. Further, to avail maximum benefit, students were guided that they could use 'Read Out Loud' facility for the written text in pdf format by using Acrobat Reader and Writer 6. Listening and Reading simultaneously enhanced the authenticity of the machine read-able text. Figure 4 on the next page do exhibit the way of its implementation.
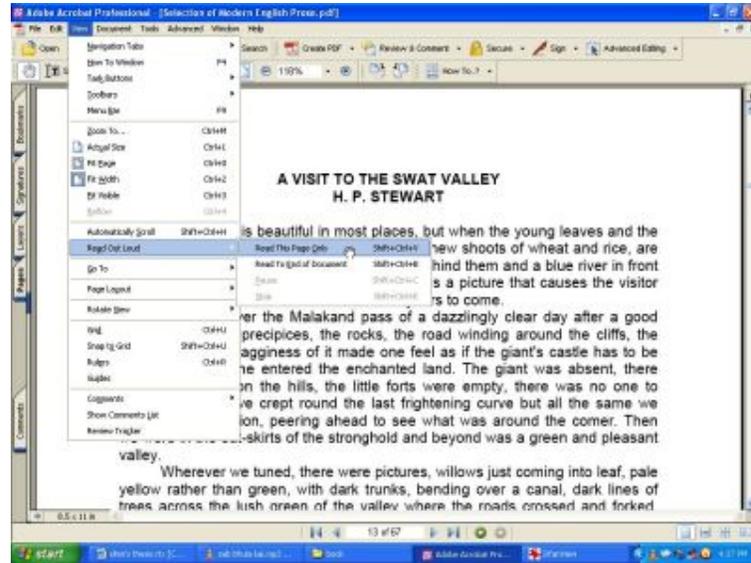
Figure 4

4.4 Encarta World English Dictionary 2009

Another very important ingredient of the CBMs provided to the students during the couching session, was the 'Encarta World English Dictionary'. This dictionary provides the solution of so many problems, especially in meeting the appropriate accent and pronunciation of English words.

Figure 5

The software teaches the user, not only the correct meaning of the words but also correct pronunciation. Another important peculiarity found in the dictionary was its ability to convey the description of the meaning in a larger context. Normally such dictionaries are recognized as encyclopedic dictionaries. Figure 5 shows a gist of it.

4.5 Word Frequency lists

In order to give students a clear listing of the vocabulary used in the lessons and further to quantify the frequency of all the words, AntConc software was used. Figure 6 shows the frequency lists of first two lessons of the concerned text book.
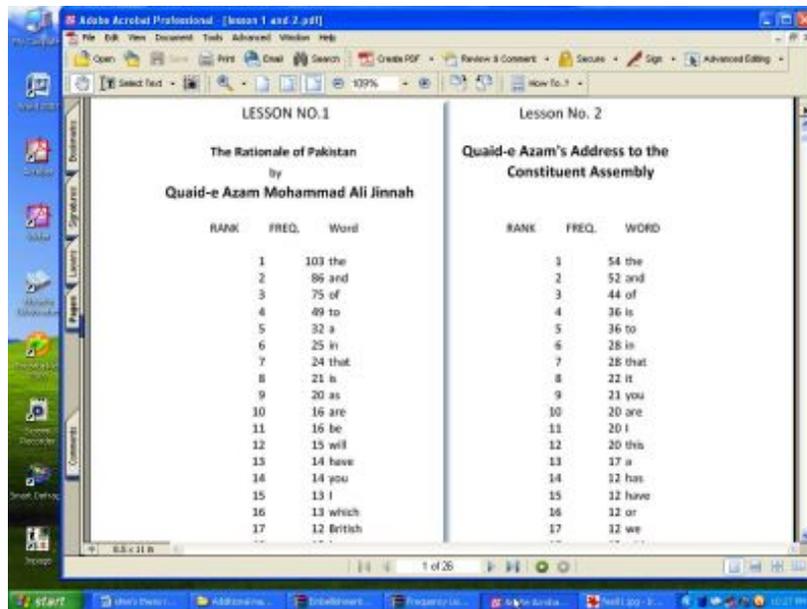
Figure 6

In lesson number 1 'the' is the most frequent word with its 103 times occurrence. Hence, it gives a clear picture to the students about the variety of vocabulary used in the text even before intensive reading.

4.6 Parts of Speech (POS) Tagging by MACHINESE

Machinese Syntax is a syntactic parser that returns base forms and compound structure, produces part-of-speech classes, inflectional tags, noun phrase markers and syntactic dependencies. Connexor's Machinese libraries transform naturally occurring text into linguistically analyzed structured data that makes more sense to knowledge-intensive applications, to the benefit of the information consumer/analyst. As per the importance of Parts of Speech in second language learning the researcher used the latest software to tag each and every word in the text. MACHINESE is one such software. The students were guided to read the text vertically while horizontal reading provided them the base form of the word and made them to identify it as which part of speech.

Figure 7

4.7 POS tagging by UCREL CLAWS 7 tagset

Famous POS tagging software developed by University Center for Computer Corpus Research on Language (UCREL) of Lancaster University UK is CLAWS. Its latest version is CLAWS 7. The researcher used this software to tag each and every word with a definite abbreviation representing a part of speech. A set of these abbreviations authenticated by UCREL is called UCREL CLAWS 7 Tagset. This tagset was also provided to the students so that they could interpret the tagged text.

Figure 8 on this page shows the tagged text while Figure 9 portrays the UCREL Tagset.
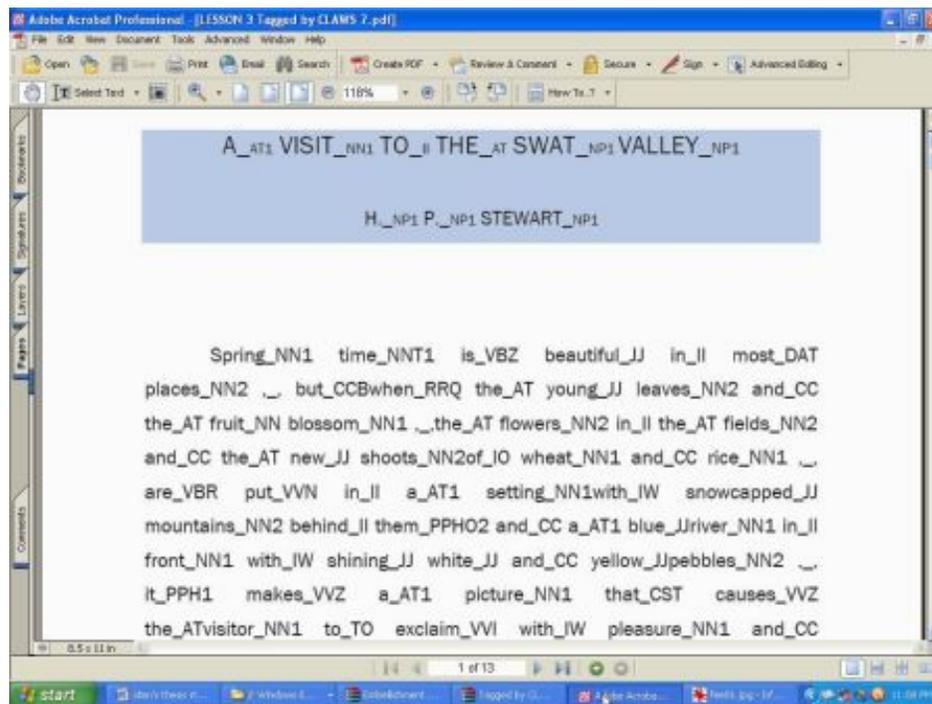

Figure 8
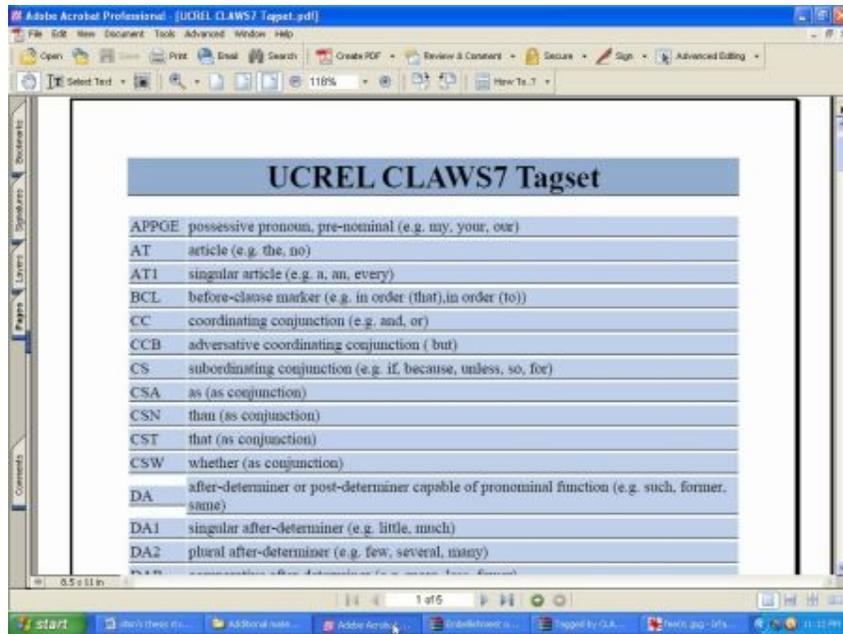
Figure 9

4.8 Multiple Choice Questions Exercises developed on Hot Potatoes 6

Finally for the self evaluation of the students, the researcher developed text based multiple choice questions.
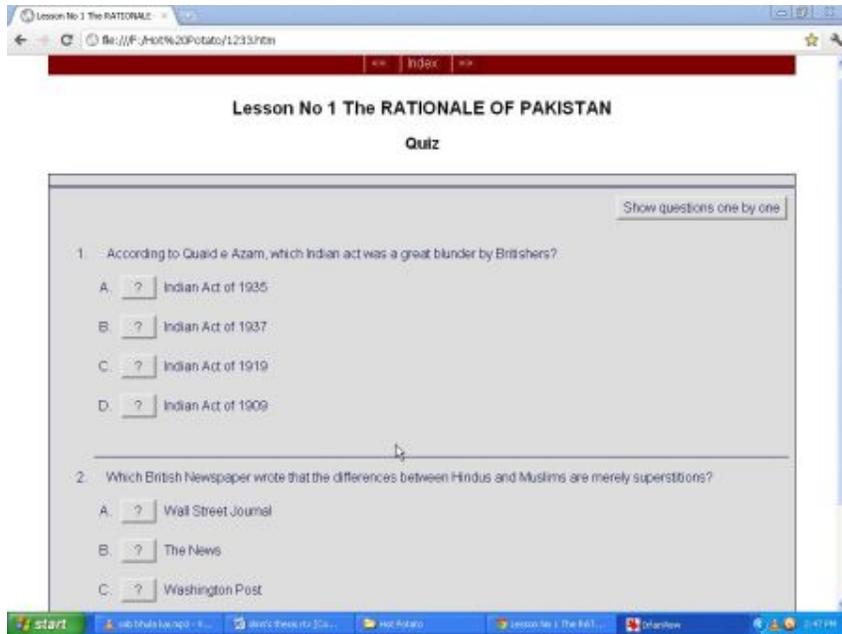
Figure 10

The score of every correct and incorrect answer given by the student is added or subtracted respectively in the accumulative automatic marks collection. Figure 10 shows a view of the MCQ test developed as a part of the CBMs.

Chapter 5

DATA ANALYSIS AND DISCUSSION

In this chapter, a thorough analysis of the data was done in order to answer the research questions. Computer Assisted Language Learning tools have been checked out to measure their efficacy in comparison to the orthodox white board lecturing method. Therefore, the major research questions under investigation were:

1. Does Computer Assisted Language Learning environment enhance the language proficiency skills of reading and writing among the students of graduation class?

2. Does the use of CALL tools enhance the motivation level of the learners towards English language learning?

3. Whether the use of CALL tools help in decreasing the fear of English, prevalent among the students?

4. Will it be relaxing for the teachers to use CALL tools in the classroom?

5. Are there any reservations or fears present in the minds of the teachers for the use of technologies in classroom?

6. Do teachers have adequate skill to operate CALL tools appropriately?

Data will be analyzed and discussed in following way:

5.1. (A) Analysis of the Reading and Writing Skill

        5.1 (B) Discussion

5.2. (A) Analysis of the Students' attitudes towards English language learning through a pre-research questionnaire before implementation of CBMs

        5.2 (B) Discussion

5.3. (A) Analysis of the Students' attitudes towards English language learning through a post-research questionnaire after implementation of CBMs

        5.3 (B) Discussion

5.4. (A) Analyzing Motivation Level of the Students

        5.4 (B) Discussion

5.5. (A) Analysis of the Teachers' interviews

        5.5 (B) Discussion

5.1. (A) Analysis of the Reading and Writing Skill

First of all a pre-test was arranged for a population of twenty Four randomly selected students of the graduation class. This was merely to bisect the class into two groups: Experimental group and Controlled group.

Following Microsoft Excel spreadsheet shows the results of the pre-test. This also shows the bisection of the class carried out on the basis of pre-test results.

RESEARCH POPULATION

And the Bisectioning of the Population on the basis of Pre Research Test

EXPERIMENTAL (CALL) GROUP

Sr. No	Name	College Roll No.	PreResearch Test Marks(25)	Exp. Class Roll No.
1	Mujeeb ur Rehman	49	16	9001
2	Mahboob Hassan	17	16	9002
3	Muhammad Imran	34	15	9003
4	Muhammad Ramzan	30	14	9004
5	Muhammad Asif	28	14	9005
6	Ghulam Abbas	36	14	9006
7	Aamir Masood	7	12	9007
8	Azhar Hussain	58	10	9008
9	Muhammad Irfan	68	10	9009
10	Tanveer Abbas	107	9	9010
11	Muhammad Tariq	96	8	9011
12	Imtiaz Aziz	86	4	9012
		TOTAL	142 /300	

Table 1

Sr. No	Name		College Roll No.	Pre Research Test Marks 25			Class Roll No.
	CONTROLLED (Non CALL) GROUP						
1	Muhammad Sultan		24		17		1001
2	Ghulam Abbas		4		16		1002
3	Muhammad Naeem		32		15		1003
4	Fiaz Ahmed		40		14		1004
5	Muhammad Arif		47		14		1005
6	Mazhar iqbal		77		13		1006
7	M. Irfan Arshad		87		12		1007
8	Abdul Hafeez		92		10		1008
9	M. Amjad Rasheed		102		10		1009
10	Sabir Hussain		105		9		1010
11	Muhammad Mahboob		120		8		1011
12	Muhammad Irfan		127		5		1012
				Total	143	/300	

Table 2

The pre-research test on initial level provided the data whose analysis generated two groups of equal capacity.

Fig. 5.1.1: Results of Pre-test and marks distribution between Controlled and Experimental group
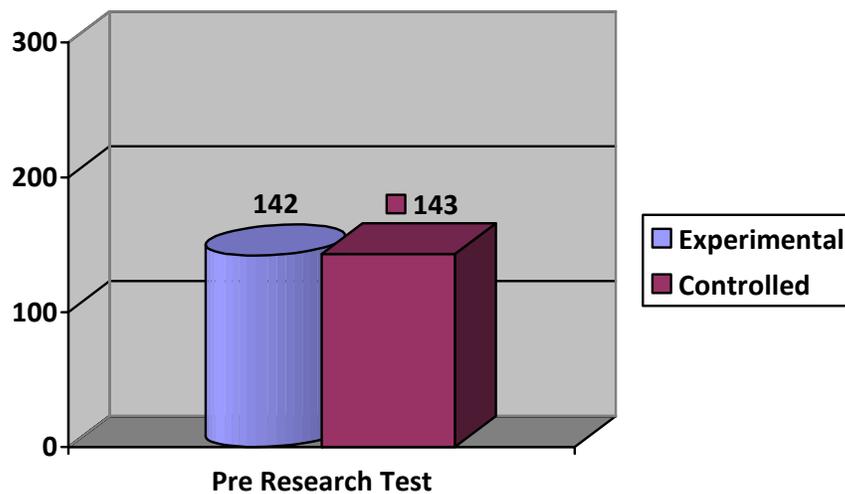
The upper given chart graphically shows that there is a difference of merely one point between both the groups. Its equilibrium justifies the division of research population into Experimental group and Controlled group.

CALL environment was used to teach Experimental group while Controlled group was taught with traditional black board lecturing method. At the end of the couching session a post research test was given to both the groups. The data was collected by marking the papers. As it was already established that both the groups are of equal competence, a comparative data analysis was made. The results generated following data.

Controlled (Non CALL) Group

Post Research Test Results

Sr. No	Controlled Class Roll No.	PreResearch Test (25)	Post Research Test Results(50)
1	1001	17	29
2	1002	16	30
3	1003	15	32
4	1004	14	26
5	1005	14	27
6	1006	13	24
7	1007	12	21
8	1008	10	22
9	1009	10	14
10	1010	9	13
11	1011	8	8
12	1012	5	11
	Total	143 /300	**TOTAL** 257 / 600

Table 3

The data was arranged and calculated by using Microsoft Excel. 'Excel worksheet given above lays down the results of the post-research test taken by Controlled (Non CALL) group.

Experimental (CALL) Group

Post Research Test Results

Sr. No	Exp. Class Roll No.	Pre Research Test Marks(25)	Post Research Test Results(50)
1	9001	16	30
2	9002	16	31
3	9003	15	33
4	9004	14	27
5	9005	14	30
6	9006	14	24
7	9007	12	25
8	9008	10	14
9	9009	10	18
10	9010	9	16
11	9011	8	13
12	9012	4	14
	Total	142 /300	**TOTAL** 275 /600

Table 4

Table 4 arranges the data and finally calculates it in order to fulfill comparative analysis.

**Fig. 5.1.2: Comparison between Pre and Post-test**
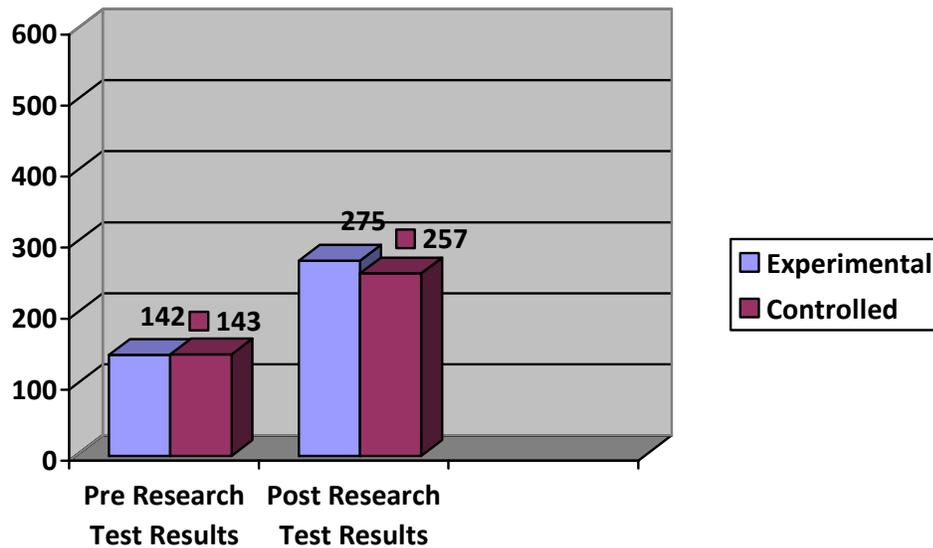
Chart 2 shows simultaneous comparison between pre and post research test while charts 3 compares only the results of post-research test.

Fig. 5.1.3: Post-test results analysis and comparison between two groups
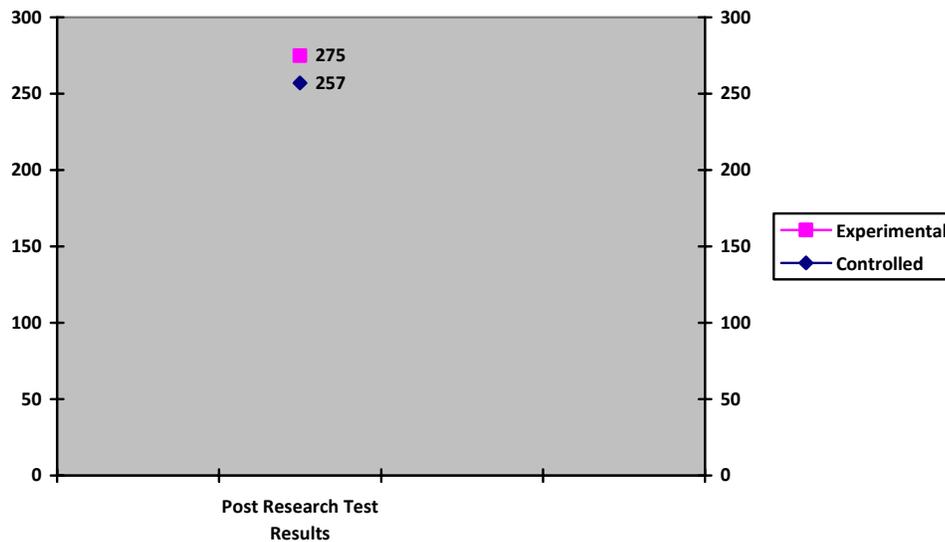
The results of the data analysis significantly proved that CBMs, to some or the other extent, have increased the students' performance in comprehending written English and in writing English itself. The chart shows that Experimental group secured 275 marks while Controlled group could gather 257. Though the difference is not as high and only of 18 marks but even then there is a difference. One must not ignore the couching time which was very short and spanned merely on three weeks. It was just because of the limited allowance from the college authorities to work with their graduation class.

In this analysis one thing was very appealing and it was the further comparison of last six students of both groups; Controlled and Experimental.

Controlled (Non CALL) Group

Post Research Test Results (Last six students)

| Sr. No	Controlled Class Roll No.	PreResearch Test (25)	Post Research Test Results(50)
1	1007	12	21
2	1008	10	22
3	1009	10	14
4	1010	9	13
5	1011	8	8
6	1012	5	11
	Total	54 /150	**89 / 300**

Table 5

Experimental (CALL) Group

Post Research Test Results

Sr. No	Experimental Class Roll No.	PreResearch Test (25)	Post Research Test Results(50)
1	9007	12	25
2	9008	10	14
3	9009	10	18
4	9010	9	16
5	9011	8	13
6	9012	4	14
	Total	53 /150	**100 / 300**

Table 6

Table 5 and 6 lays a quantitative comparative analysis of the bottom six less competent students of both the groups. The results showed that less competent students got more benefit from CBMs than those of controlled group who were taught without CBMs. The quantitative comparative analysis given on the previous page shows that both the groups were of equal capacity at the time of pre-test but after the couching session they showed a reasonable difference in their capacity of apprehending and writing English language.

Fig. 5.1.4: Difference of the marks within each test between Controlled group and Experimental group
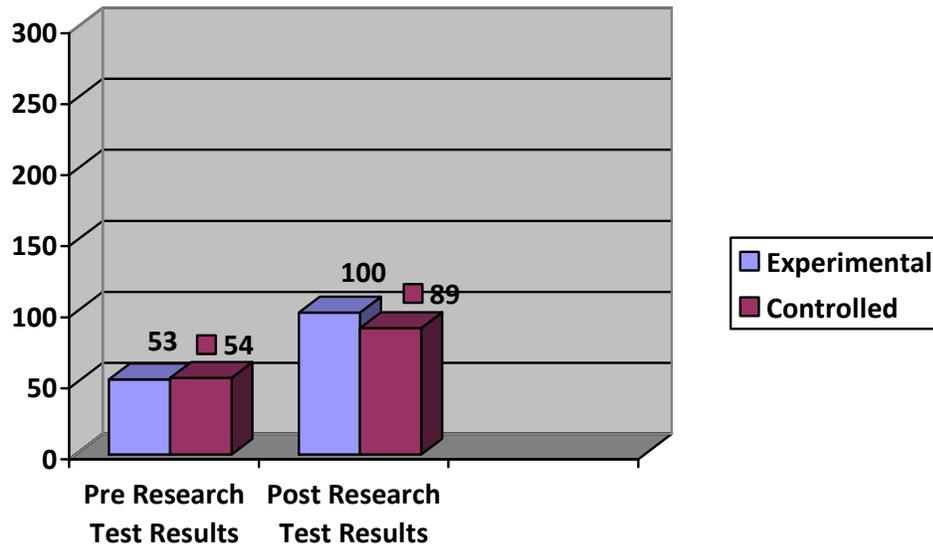
Focusing only on Experimental group and comparing first six more competent students with the less competent last six students showed another landmark discovery. The data analysis proved that the last six less competent students showed more betterment. In comparison to first six students, they secured high marks in post research test. The following excel sheets and charts satisfy this conclusion quantitatively.

Experimental (CALL) Group
Post-test results (First six competent students)

Sr. No	Experimental Class Roll No.	PreResearch Test (25)	Post Research Test Results(50)
1	9001	16	30
2	9002	16	31
3	9003	15	33
4	9004	14	27
5	9005	14	30
6	9006	14	24
	Total	89 /150	175 / 300

Table 7

As it has been already established that the total difference of marks between experimental and controlled group was of 18 points, further it was analyzed whether more competent students participated more in bringing up this difference of 18 marks or these were less competent students who performed well.

Experimental (CALL) Group

Post Research Test Results

| Sr. No	Experimental Class Roll No.	PreResearch Test (25)	Post Research Test Results(50)
1	9007	12	25
2	9008	10	14
3	9009	10	18
4	9010	9	16
5	9011	8	13
6	9012	4	14
	Total	53 /150	100 / 300

Table 8

Fig. 5.1.5: Results showing less competent students getting more advantage with the use of CBMs within the Experimental group
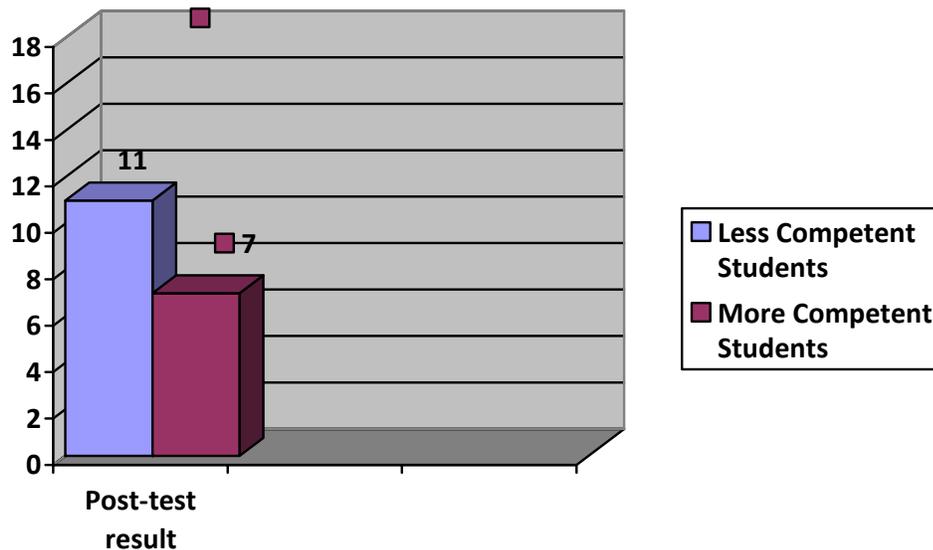
From this analysis it has been quantitatively established that less competent students get 11% more benefit than more competent students. Out of

the total change shown by experimental group 61% came from the less competent students while 39% was contributed by more competent top six students.

Fig. 5.1.6: Results showing share in enhancement of performance in percentage between less competent students and more competent students within the Experimental group after the use of CBMs
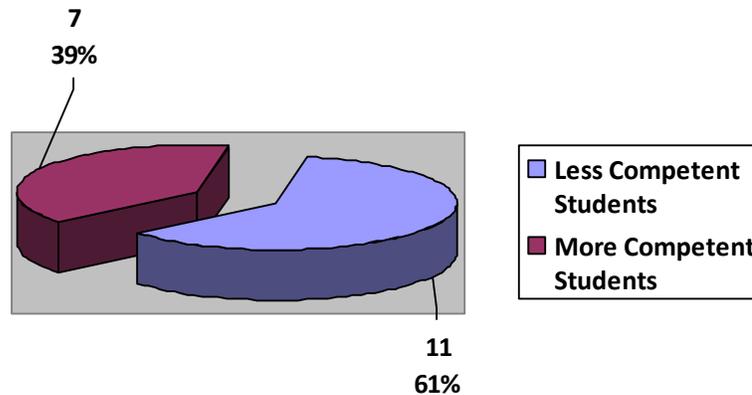
5.1 (B) Discussion

Discussion hereafter highlights the change in capacity to gain marks among students kept in two different environments for more than three weeks. The major inquiry was to map the difference in Reading and Writing skill of the student. Here in 5.1(B) the discussion is based on the data analyzed in 5.1 (A). For Experimental group, Computer Assisted Language Learning environment was furnished with all the possible equipment including multimedia. It was noticed that the satisfaction level of the students was high though it was difficult to achieve 100% in the city like Kot Adu. The results yielded after the comparison of post tests of both the groups proved that CALL environment raised the marks gaining capacity of the students. Supplementary to the situation prevalent, It can be stated that there is a breech between English language and the student of

Graduation. This may be referred as fear of English or psychological disassociation between the both. Dramatized videos certainly impart clarity to the student as one of teacher remarked:

"There is no other opinion. It certainly motivates when we have video clips. In fact, we also see characters in moving form belonging to the text of the syllabus. Certainly, our student gets motivated".

(Source of data: An interview with teacher A, my transcription)

CALL environment proved more thought provoking. For a specific question asked in annual examination of Bahauddin Zakariya University where a student has to answer four questions in at least 150 words each by using the given context of maximum 30-40 words. This question mainly gathers students' ability of both Reading and Writing. It was observed that in answering this question in post test students of both the groups showed different results. Experimental group was now more able to gather ideas related to the topic and could elaborate the point easily. While on the other hand majority of Controlled group was still unable to write more than three sentences.

Secondly, it was observed that lower half of the population of experimental group received more advantage of CALL environment. In 5.1.6 it has been analyzed that 61% of the total improvement was contributed by lower half of the Experimental group. Generalizing the facts, it can simply be stated that CALL is more effective methodology for the students who are less proficient in Reading and Writing English language at Graduation level. The failing ratio in all the universities of Punjab is not less than 60% hence utilizing CALL tools in English language pedagogy can settle this problem.

In normal reading of the text there are so many things that can not be understood by merely grasping the meaning of the words. The CALL material provided to the students proved beneficial in imparting them a sense to capture image out of the structure. Dramatized videos played the most important role in this regard. It was observed that these videos implicitly helped the students in generating ideas about the subject matter while writing in the post test. This additional ability congregated from the provided CBMs eventually assisted the learner in gaining marks.

CALL Materials played a vital role in making a learner autonomous. Seven elements provided to the student mentioned in Chapter 4 give autonomy in learning the course book. The CALL material was developed in consideration to this point. Despite teacher's guidance and proper couching, now the learner himself can study the material. Through CALL Materials too difficult text can be explained in comprehendible way. He can rerun the video for several times. Repetition and enforcement made transformed the passive learner into active learner.

Another important feature of CALL Materials was the addition of exercises formulated on Hot Potatoes 6.3 which provided the learner an opportunity to evaluate his knowledge of the completed.

So, it can be concluded that in terms of statistical analysis detailed in 5.1 (A) and discussed here in 5.1 (B), experimental group had improved much more than control group in their skills of reading and writing. Merely CALL methodology is to be blamed. Change in experimental group was solely due to a different environment provided by Computer Assisted Language Learning tools. This quantifiable change was found merely after the coaching of just twenty three days

which is quite a short period for students to adjust themselves with this new methodology of teaching English. The analysis of results of experimental group students was in favor of CALL methodology. So it can be said that wonderful results can be obtained by successful induction of CALL methodology right from the start of the teaching session. As one of the teacher asserted:

"Our current methods are not sufficient. I think…. New methods should be developed that could capture the interest of the student and CALL environment would be ideal for this. It will also enhance the students' learning of four skills".

(Source of data: An interview with teacher G, my transcription)

5.2 (A): Analysis of the Students' attitudes towards English language learning through a pre-research questionnaire before implementation of CBMs

In order to answer one of the research questions based on mapping the difference between two levels of attitudes, two questionnaires were developed. The two levels of attitudes represent the pre research position and post research position of the students' minds in their conception about CBMs. Population was the same as in 5.1 and it was comprising of 24 randomly selected students from the class of more than hundred students at Govt. Post Graduate College Kot Adu, District Muzaffar Garh. In order to locate this conduct of pre-research questionnaire in the overall structure of this research, we will have to rollback the timeline of history to the starting day of research: Monday 02nd May, 2011. The selected population was requested to fill a questionnaire. Researcher's aim was to unfold the preoccupied knowledge of CALL, if any, by the students and secondly to map the fears amongst them pertaining to the learning of English. As the primary question of the study has been answered in 5.1 and now in 5.2 two more questions have been answered. Questions are given below.

- Whether the use of CALL tools help in decreasing the fear of English, prevalent among the students?
- Does the use of CALL tools enhance the motivation level of the learners towards English language learning?

To answer these questions, a questionnaire containing 16 questions was developed. Few important questions addressing the upper mentioned research questions have been selected, analyzed and debated on.

For ease of analysis, following important aspects in the data will be interpreted.

5.2.1 Knowing the Pre-occupied Pre-research conceptions of the students about CALL

5.2.2 Current tools available for English language learning in the classroom

5.2.3 Reason for their (students') low attendance in the class

5.2.4 Students' satisfaction towards current language learning tools in enhancing four skills (listening, speaking, reading, writing)

5.2.5 Can CBMs (Computer Based Materials) enhance their speed of learning English?

5.2.6 Perceiving the use of CBMs difficult or easy?

5.2.7 CALL environment as a motivator for the students

5.2.8 Students' preference for CALL class or Non-CALL class

5.2.1 Knowing the Pre-occupied Pre-research conceptions of the students about CALL

All the questions were based on MCQ format. For this question students were asked about their any inference or experience of CALL as discipline. In this specific case of this study it was better to know at the start of the study.

Fig. 5.2.1: Students' pre-research knowledge of CALL

Q.1 Are you familiar with CALL?
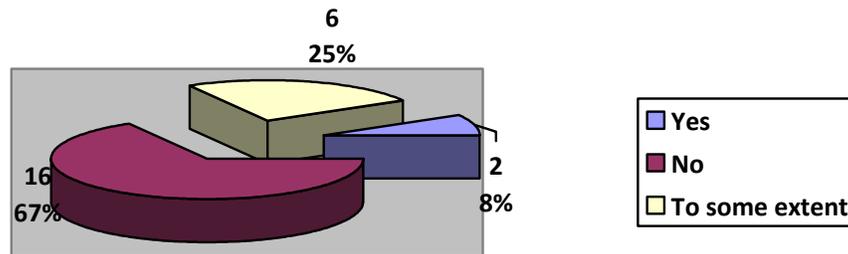
Q : Are you familiar with Computer Assisted Language Learning (CALL)?

The analysis shows that merely 8% students were aware with the term of CALL while 67% students were totally ignorant about Computer Assisted Language Learning.

5.2.2 Current tools available for English language learning in classroom.

Another important question asked was about the facilities they had in their classroom. They were given four options:

a) Black/White Board

b) Computers

c) Multimedia

d) Both a & b

e) Others

Fig. 5.2.2: Tools available for English language learning in the classroom.
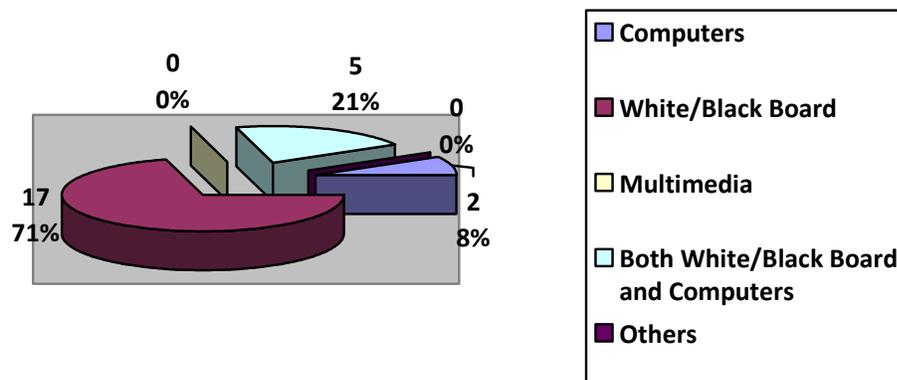
Q. What facilities do you have in your class room?

The analysis clarified that 71% students confirmed that they were being taught by merely white board lecturing method and further no IT equipment was being used. Later the discussion with the students affirmed that in few lectures, their teacher used his laptop to show them the pictures of few concerned things. Therefore 21% students gave their opinion in favor of both: Black Board and

Computer. On the basis of the same lecture by their teacher, only 8% stated 'yes' for computers.

## 5.2.3 Reason for their (students') low attendance in the class

The researcher gave highest value to this question as this directly inquired the problem, lying on the part of the students in learning English. They were asked about the reasons of their low attendance in the class. According to the college record, their average attendance was 56% which is not satisfactory. The question was:

Q: As per the college record, the average attendance of your class is 56%. What the reason you highlight for this low attendance ratio?

a) Lack of Motivation   b) Fear of English

c) Personal Problems   d) Both a & b

Out of total population of 24, eleven students believed that both 'fear of English' and 'Lack of Motivation' restricts them to come into the class. While 8 students proclaimed that it was merely the fear of English that keeps them away from the class.

**Fig. 5.2.3: Reason for students' low attendance in the class**
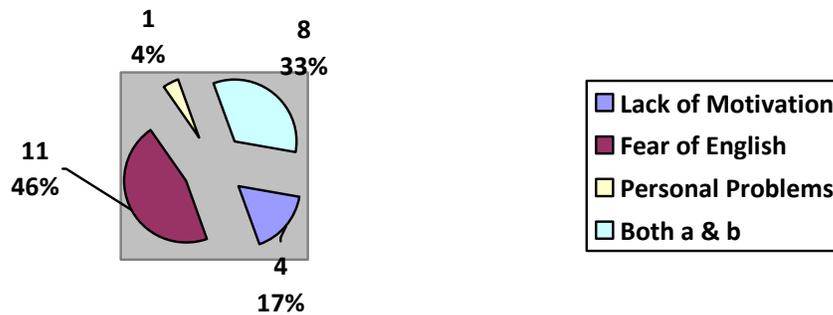
46% students declared 'fear of English' as their chief cause for not attending the classes. While collectively 96% spoke out for 'lack of motivation' and 'fear of English' both individually or collectively as greater reasons for remaining away from class. The researcher had already laid down his wish while mentioning the objectives of this study that he wanted to counter this fear of English prevalent in the learners.

5.2.4 Students' satisfaction towards current language learning tools in enhancing four skills (listening, speaking, reading, writing)

Another question, being an important part of the pre-research questionnaire, asked the students about their satisfaction level towards current ways of teaching.
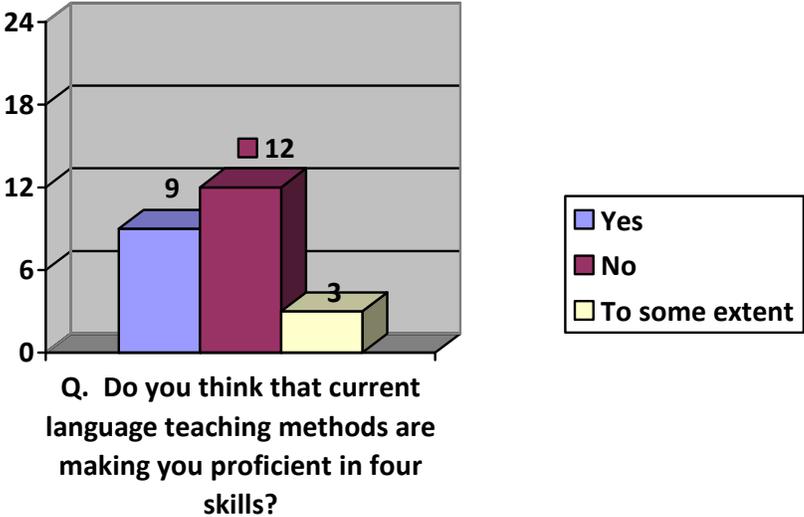
Fig. 5.2.4: Students' satisfaction towards current language learning tools

Q. Do you think that current language teaching methods are making you proficient in four skills?

Yes
No
To some extent

Fig. 5.2.4: Students' satisfaction towards current language learning tools

12
50%

7
29%

5
21%

Yes
No
To some extent
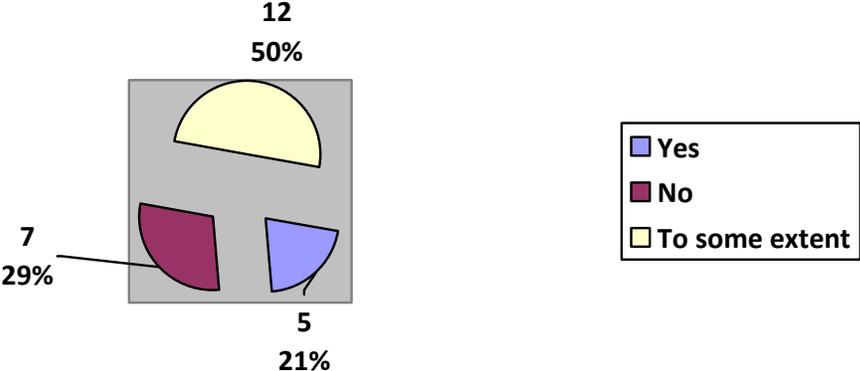
Q. Do you think that current language teaching methods are making you proficient in four skills?

From the analysis it is clear that largely, the students are not satisfied with their overall learning speed. Though 50% population swindled between both 'yes' and 'no' and they tick marked 'to some extent'. This also symbolifies the uncertainty present in their minds about their progress in learning English

language. 21% students endorsed their current ways of teaching while 29% totally rejected current ways of English language teaching.

## 5.2.5 Can CBMs (Computer Based Materials) enhance students' speed of learning English?

Hypothesis of this study states that the problem justified in 4.2.4 can be eradicated by the use of Computer Assisted Language Learning tools. It states that the application of CALL environment with the help of CALL tools makes the students proficient in language skills. In consonance to the hypothesis, students were asked in pre-research questionnaire:

'Do you think, these four skills can be learnt more speedily and accurately by studying our course materials through CALL environment?'

The options were:

a) Yes   b) No   c) To some extent

Fig. 5.2.5: Can CBMs (Computer Based Materials) enhance students' speed of learning English?
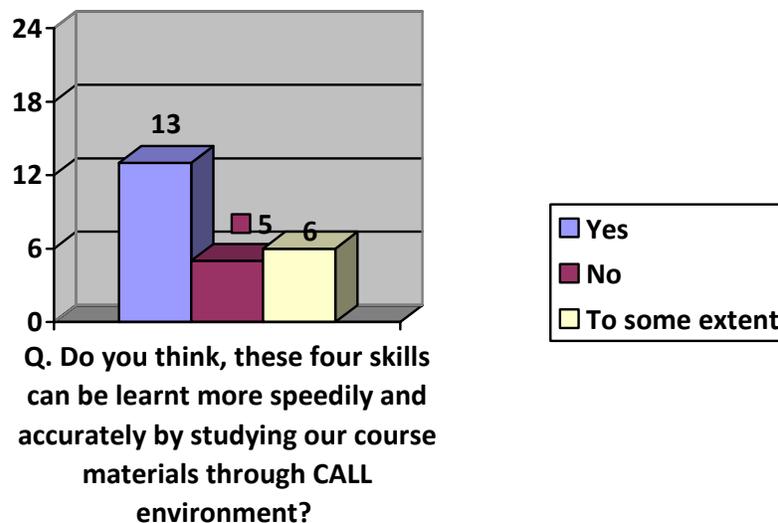
Q. Do you think, these four skills can be learnt more speedily and accurately by studying our course materials through CALL environment?

Fig. 5.2.5: Can CBMs (Computer Based Materials) enhance students' speed of learning English?
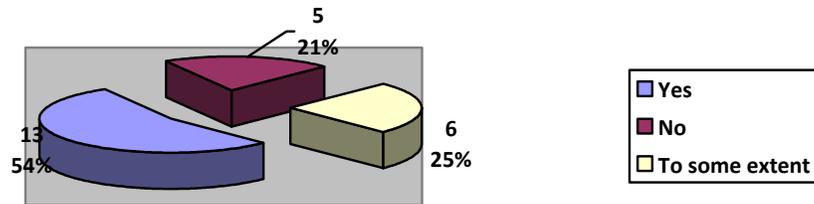

Q. Do you think, these four skills can be learnt more speedily and accurately by studying our course materials through CALL environment?

The analysis confirms that more than half of the population is of the view that the integration of computers in English language teaching will speed up their learning and they can attain accuracy in less time. Merely 21% population bears the idea that CALL environment can no more be beneficial in setting the things right.

5.2.6 Perceiving the use of CBMs difficult or easy?

Further students were asked to give their perception 'whether CALL tools will make learning easy or difficult'.

**Fig. 5.2.6: Perceiving the use of CBMs difficult or easy?**
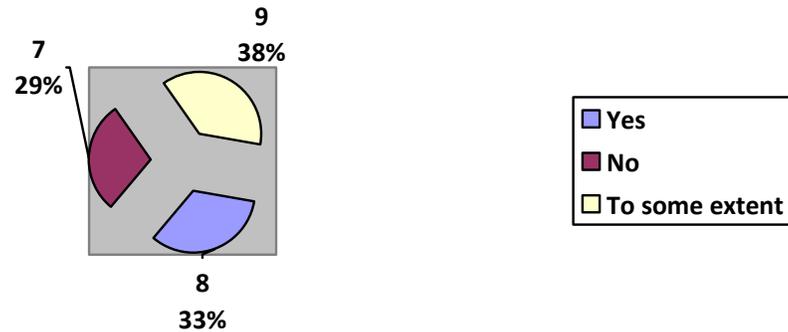
Q. Do you think, by CALL environment we can come up with easy techniques of English language learning?

38% students perceived that CBMs can impart ease to English language learner to some extent. 33% of the population endorsed that using CBMs in English language learning would be easier way to learn English. The students negating the concept of ease in language learning due to CBMs were 29%.

5.2.7 CALL environment as a motivator for the students

A very important research question was to map quantitatively the change in the motivation level of the students with and without CALL environment. This question has been answered through a quantitative analysis of the data collected during the couching session in 5.4. In order to know the perceptions of the students for the relation of CALL environment with the motivation, this question was also given place in this pre-research questionnaire.

Fig. 5.2.7: CALL environment as a motivator for the students
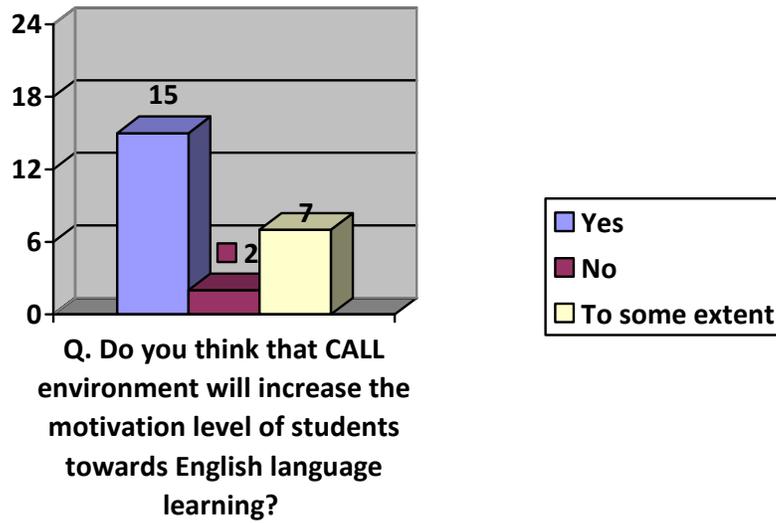
Q. Do you think that CALL environment will increase the motivation level of students towards English language learning?

Legend:
- Yes
- No
- To some extent

Fig. 5.2.7: CALL environment as a motivator for the students

Legend:
- Yes
- No
- To some extent
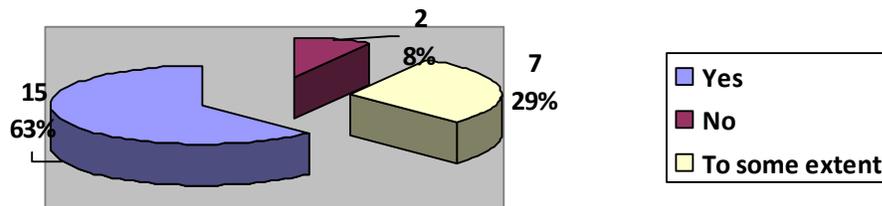
Q. Do you think that CALL environment will increase the
motivation level of students towards English language learning?

Discussing the details of the analysis, the researcher came to know that 63% students were already optimistic for the capacity of CALL tools in enhancing the motivation level of students towards English language learning. 29% believed that the integration of Computers in language learning would enhance the motivation among students not to a greater extent.

5.2.8 Students' preference for CALL class or Non-CALL class

Finally students were asked about their liking and interest whether for CALL class or for Non-CALL class. This will conclude the story of pre-research inquisitive segment by finally laying down how many of the population bluntly wished to be a part of CALL class and how many desired to join Non-CALL class.

Fig. 5.2.8: Students' preference for CALL or Non-CALL class

17
71%

7
29%

☐ Computer Assisted Language Learning class

■ Non Computer Assisted Languae Learning class
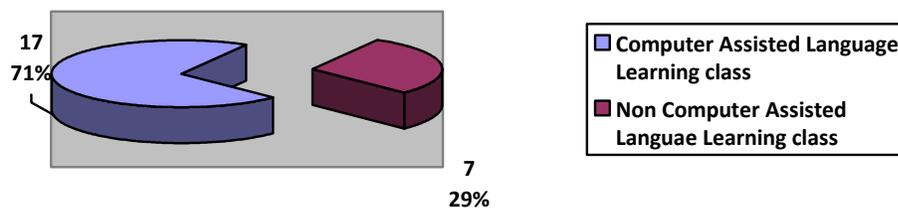
Q. If you were given a choice, which class you would have chosen to sit?

The analysis of the data shows that 71% of the population wished to sit in CALL class while rest 29% preferred Non-CALL class.

5.2 (B) Discussion

The analysis of the pre research questionnaire in 5.2(A) was merely worked out to know about the pre occupied conceptions of the students about CALL. The discussion on the overall findings of pre research questionnaire and post research questionnaire and the change in opinion of the students has been discussed in 5.3 (B). The major discovery made after the analysis of the data collected through this questionnaire has been laid down in 5.2.3. In the question asked against the reason of their low attendance, 96% students nominated lack

of motivation and fear of English as main reasons of their low attendance. As per college record their attendance was merely 52%. The results of the analysis support the hypothesis of the study which portrays current situation as unsatisfactory.

5.3 (A) Analysis of the Students' attitudes towards English language learning through a post-research questionnaire after implementation of CBMs

As it has been mentioned earlier that two questionnaires were developed in order to answer two streamlined research questions based on mapping the difference between two levels of attitudes: before and after the couching session. The two levels of attitudes represent the pre research position and post research position of the students' minds in their conception about CBMs. Population was the same as in 5.1, 5.2 and 5.3. In 5.2, pre research attitude of the students towards CALL has been analyzed. Here in 5.3 post-research opinions are analyzed and further compared with pre-research positions. Tuesday, 24th May, 2011 was the final day of the research. On this day, after the end of couching session and post-research test students were requested to fill a post-research questionnaire. Researcher's aim was to unfold the change in perception about CALL in the minds of the students before and after the implementation of CBMs. Two subsidiary questions have been answered. Questions are given below.

- Whether the use of CALL tools help in decreasing the fear of English, prevalent among the students?

- Does the use of CALL tools enhance the motivation level of the learners towards English language learning?

To answer these questions, first, the questions included in post-questionnaire were analyzed and then were compared with the results of pre-research questionnaire. The post-research feedback questionnaire, containing 16 questions for Experimental group and 17 questions for Controlled group, was

developed. Few important questions addressing the upper mentioned research questions have been selected, analyzed and debated on.

For ease of analysis, following important aspects in the data have been interpreted.

(Section A)

For Experimental Group

The population in this section was taken from the group which was taught for 23 days (02 May 2011 to 24th May 2011) with the help of CBMs. It was 12 in number. In this study this group has been referred as Experimental Group. Following is the set of questions which has been selected by the researcher for thorough analysis in order to answer the research questions.

5.3.1 Was CALL environment appealing?

5.3.2 Future classroom scenario

5.3.3 Development of the expertise to use CALL materials

5.3.4 Improvement in the Listening skill

5.3.5 Improvement in the Speaking skill

5.3.6 Improvement in the Reading skill

5.3.7 Improvement in the Writing skill

5.3.8 Students' overall satisfaction towards CALL tools in enhancing four skills (listening, speaking, reading, writing)

5.3.9 Perceiving the use of CBMs difficult or easy

5.3.10 CALL environment as a motivator for the students

5.3.11 Eradication of the fear of English through CALL environment

5.3.12 Students' preference for CALL class or Non-CALL class

5.3.1 Was CALL environment appealing?

All the questions were based on MCQ format. For this question students were asked about their overall experience of CALL environment. It was asked whether that learning of course books through CALL environment during the couching session appealed them or not.

Fig. 5.3.1: Was CALL environment appealing?

Q. Did this learning of course books through CALL environment appeal you?
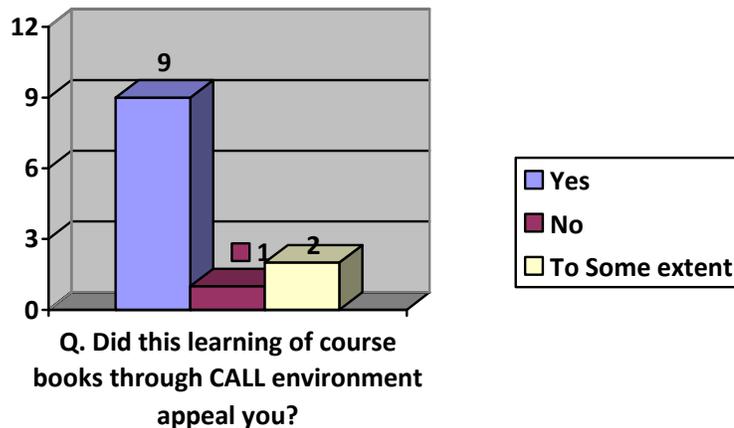
The analysis shows that 75% students affirmed that the CALL environment was appealing and attractive. Merely 8% students bluntly said that they didn't feel any attraction towards the environment built through CALL tools for English language learning purpose. 17% said that the usage of CALL remained fruitful but to some extent.

5.3.2 Students' desire for future classroom scenario

Another important question asked was whether, in the future, students would appreciate any change in their classroom brought through CBMs. This was essential in case to judge the overall appreciation of CALL environment by the student.

Fig. 5.3.2: Students' appreciation of CBMs for future use in classroom.
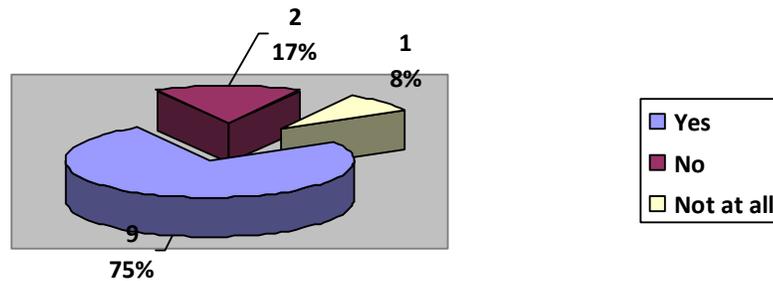
Q. Will you appreciate any change in your class
environment with the help of computer technologies at any
stage of English language learning in future?

The analysis clarified that 75% students fully endorsed the use of CALL environment in their future. 17% disfavored CALL application while 8% strictly didn't allot any job to CALL tools in their future environment.

5.3.3 Development of the expertise to use CALL materials

Students were asked about their enhanced newly built capacities to use the CALL materials with the help of CALL tools. During the couching session they were properly trained to use the provided stuff of CALL materials comprising total of seven different forms. To know their level of developed expertise in building up CALL environment, the data was collected and further analyzed.

Out of total population of 12 belonging to Experimental group, Four students believed that they were now able to use CALL materials.

Fig. 5.3.3: Development of the expertise to use CALL materials
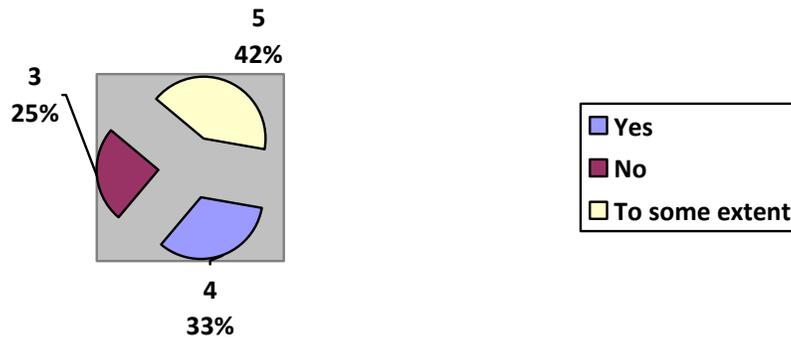

42% students declared that they have developed expertise but to some extent. 33% population were of the view that they completely got the know how of operational matters of CALL tools and materials. 25% students stated that they were still facing problems in operating CALL equipment and material.

5.3.4 Improvement in the Listening skill

Heading towards the effect of CALL in enhancing four skills, five questions were included in the questionnaire. Change in each skill was separately inquired in four questions while fifth question tried to gather the overall satisfactory level of the student towards the relation between CALL environment and four skills. In this chain of questions, the first question was related to Listening skill. Figure 4.3.4 manifests the question with its respective answers given by the students.

**Fig. 5.3.4: Improvement in the Listening skill**
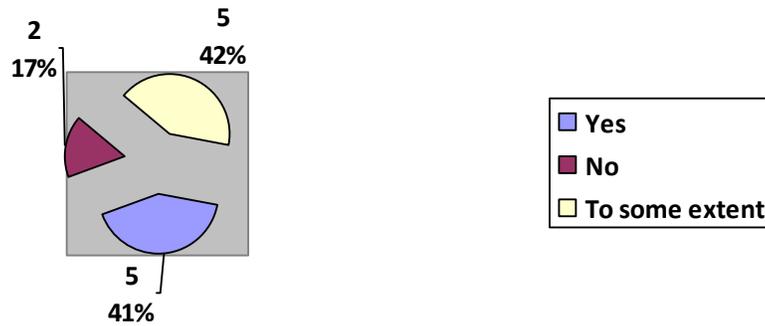
Q. Do you think that your Listening skill improved under the influence of CALL environment?

From the analysis it's clear that merely 17% students said that they got no influence of CALL tools in improving their listening power.

5.3.5. Improvement in the Speaking skill

Figure 4.3.5 draws an analysis of the enhancement in the speaking skill of the students with the help of CALL environment. The question has also been put.

**Fig. 5.3.5: Improvement in the Speaking skill?**
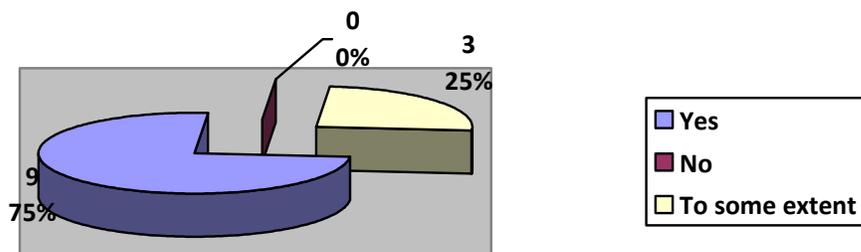
Q. Do you think that your Speaking skill improved under the influence of CALL environment?

The analysis confirms that speaking skill is the highly acclaimed skill in achieving prime nourishment by CALL environment. 75% of the population affirmed that their speaking skill was greatly polished under the influence of CALL tools.

5.3.6. Improvement in the Reading skill

It is a truth nationally acknowledged that the Education system of the country merely focuses on the reading skill and the writing skill of the child. From primary to highest level of education listening and speaking skills are taken of no worth and hence are not evaluated at any level while on the other hand reading and writing skills are the part and partial of current CALP skills. Figure 5.3.6 analyzes students' answer about the improvement in reading skill.

**Fig. 5.3.6: Improvement in Reading skill?**
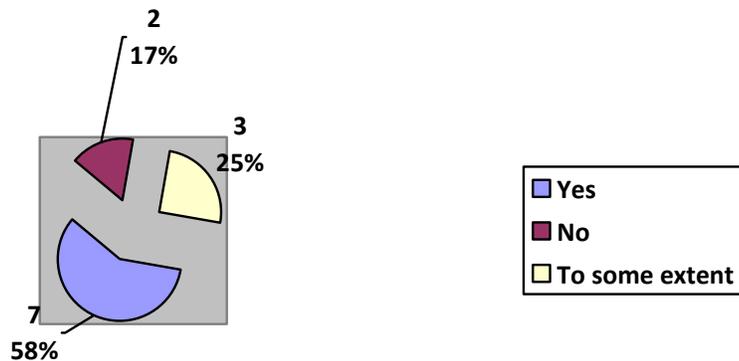
Q. Do you think that your Reading skill improved under the influence of CALL environment?

58% students confirmed that CBMs strengthened their reading skill. The students negating the concept were only 17%.

5.3.7 Improvement in the Writing skill

A very important research question was to map quantitatively the change in the writing skill of the student with and without CALL environment. This question has been answered through a quantitative analysis of the data collected during the couching session in 5.1.1, 5.1.2 and 5.1.3. In order to know the perceptions of the students about this change by themselves for the relation of CALL environment with the writing skill, it was considered compulsory to include this question in this post-research feedback questionnaire.

Fig. 5.3.7: Improvement in the Writing skill
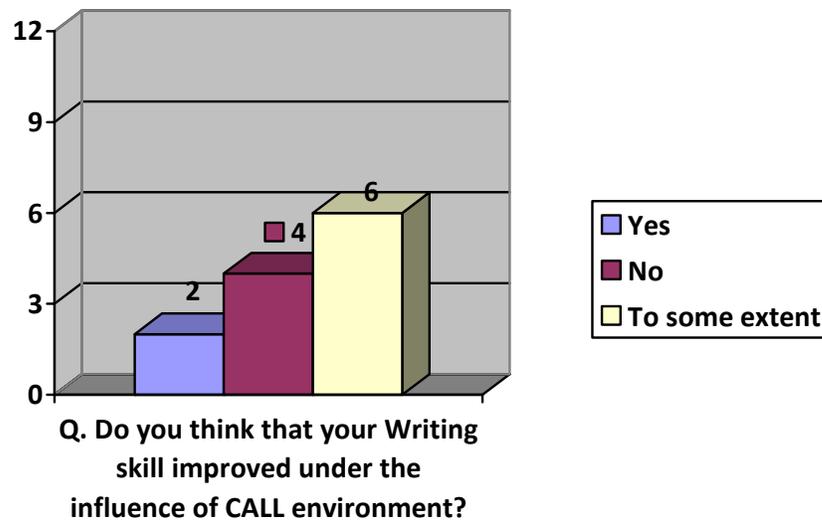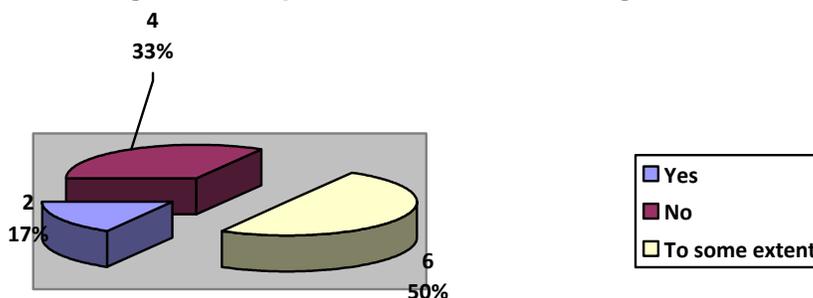
Q. Do you think that your Writing skill improved under the influence of CALL environment?

Fig. 5.3.7: Improvement in the Writing skill

Q. Do you think that your Writing skill improved under the influence of CALL environment?

Discussing the details of the analysis, the researcher came to know that merely 17% students fully endorsed that they were conscious about the improvement in their writing skill. 50% of the total population was optimistic and believed that they remained successful in nourishing their writing skill to some extent in CALL environment. There was a reasonable number as well who totally denied the concept. These were 33% of the total population. Analysis shows that writing skill is the least beneficiary of CALL environment. Comparative analysis of the data has been carried out in next chapter in the detailed discussion of the data analysis.

5.3.8 Students' overall satisfaction towards CALL tools in enhancing four skills (listening, speaking, reading, writing)

Finally students were asked about their general experience whether they felt the use of CALL tools beneficial for the improvement of all the four skills.

Fig. 5.3.8: Students' overall satisfaction towards CALL tools in enhancing four skills (listening, speaking, reading, writing)
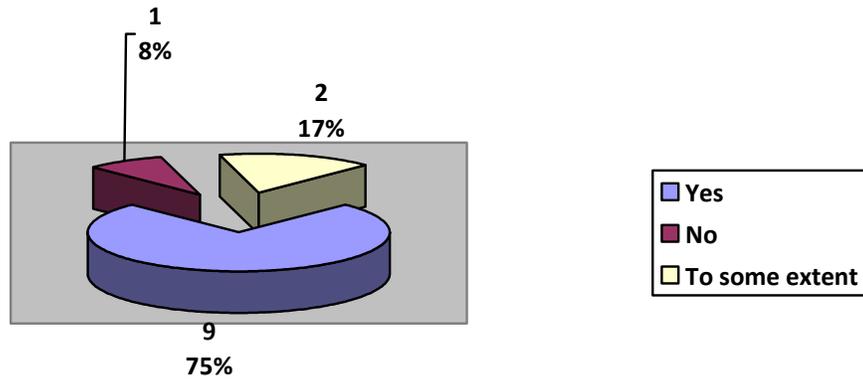
Q. After the couching session, do you think these four skills can be learnt more speedily and accurately by studying course materials through CALL environment?

The analysis of the data shows that 75% of the population affirmed that CALL environment do enhance the speed of learning of all the four skills.

5.3.9 Perceiving the use of CBMs, difficult or easy?

It was also to know whether the induction of CBMs in English language learning would be easy or difficult on the part of the end user i-e student. The question was fairly answered. Figure 5.3.9 lays down the number of population, the question and their diversified opinions.

Fig. 5.3.9: Perceiving the use of CBMs, difficult or easy
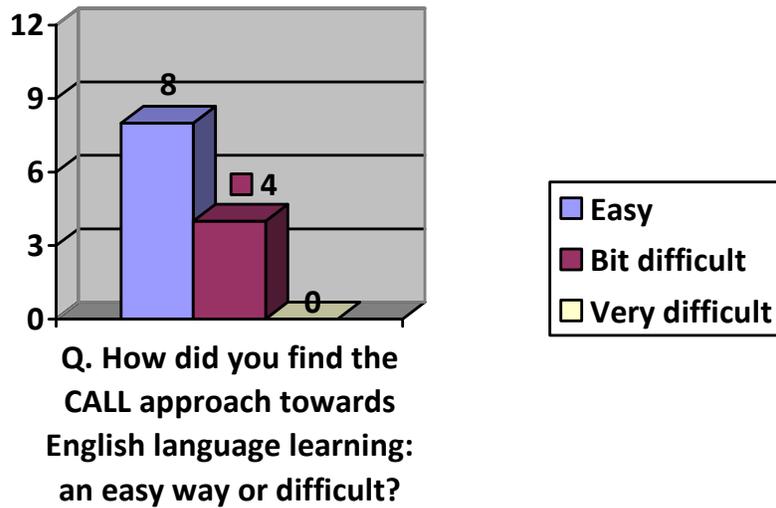
Q. How did you find the CALL approach towards English language learning: an easy way or difficult?

Fig. 5.3.9: Perceiving the use of CBMs, difficult or easy
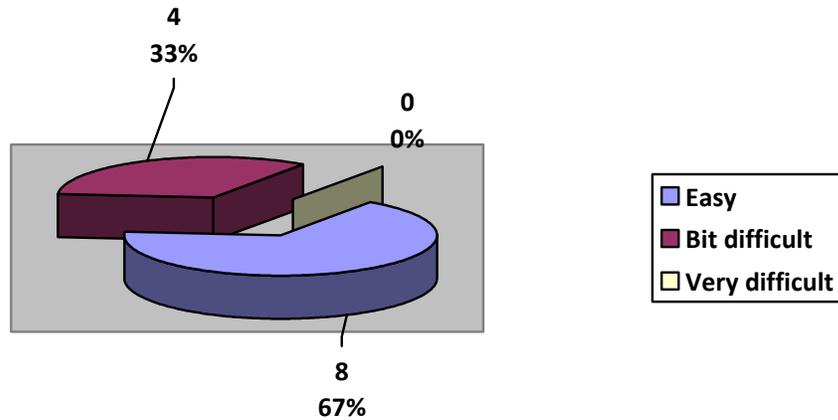
Q. How did you find the CALL approach towards English language learning: an easy way or difficult?

The analysis confirms that more than half of the population is of the view that the integration of computers in English language is easy. 33% population bears the idea that learning English through CBMs is bit difficult.

5.3.10 CALL environment as a motivator for the students

A very important question which has been answered quantitatively in 5.4 was also given place in post research feedback questionnaire. Students were asked about the increase in their motivation level towards learning English after the couching session. Figure 5.3.10 declares that a large number of the population affirmed that CALL environment greatly boosted their level of interest and motivation.

Fig. 5.3.10: CALL environment as a motivator for the students
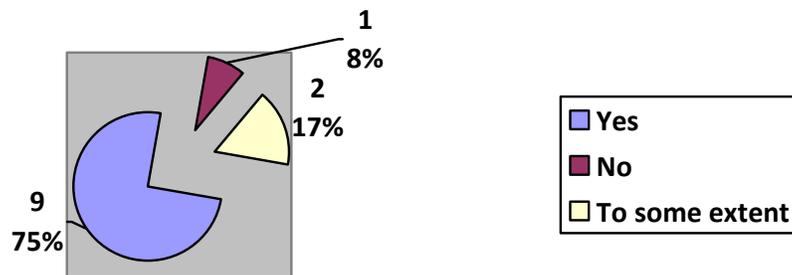
Q. Do you think that CALL environment boosted your level of interest in English learning?

75% students observed that CBMs imparted them a strong wave of motivation towards English language learning. Merely 8% of the population totally negated the concept of motivation attached with CBMs.

5.3.11 Eradication of the fear of English by CALL environment

In pre-research questionnaire, in 5.2.3 students were questioned about the reason of their low attendance in the class. 46% of the population considered the

fear of Enlish as biggest cause of their low interest in the class. 33% blamed both: less motivation level and fear of English. In post research questionnaire experimental group was again asked whether they still experience any fear of English. Figure 5.3.11 quantifies the say of the students by laying the question.

Fig. 5.3.11: Eradication of the fear of English by CALL environment

Q. Have you still any fear of English in your minds that you mentioned in your pre-research questionnaire ?

Fig. 5.3.11: Eradication of the fear of English by CALL environment
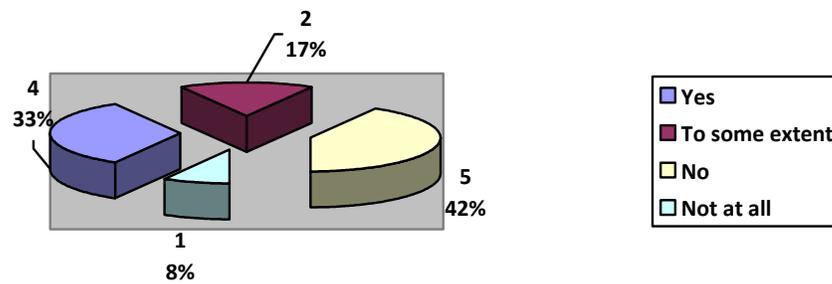
Q. Have you still any fear of English in your minds that you mentioned in your pre-research questionnaire?

Discussing the details of the analysis, the researcher came to know that total 50% of the population said that the CBMs played a role in eradicating the

fear of English language. 33% stated that they still have fears. 17% logically converged that their fear of English language was eradicated by CBMs but merely to some extent.

5.3.12 Students' preference for CALL class or Non-CALL class

Finally after the couching session, students were asked about their liking for CALL class or Non-CALL class. This question summed up the whole story and implicitly answered the students' liking and disliking. Figure 5.3.12 arranges the data and produces results.

Fig. 5.3.12: Students' preference for CALL class or Non-CALL class
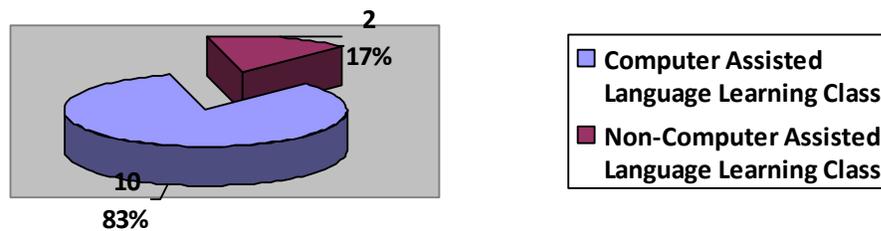
Q. If you are given a choice for future learning, which class you will choose to sit?

The analysis of the data shows that 83% of the population wished to sit in CALL class while rest 17% preferred Non-CALL class.

(Section B)

For Controlled Group

The population in this section was taken from the group which was taught for 23 days (02 May 2011 to 24th May 2011) with the help of traditional tools

(white/black board lecturing). It was 12 in number. In this study this group has been referred as Controlled Group. Following is the set of questions which has been selected by the researcher for thorough analysis in order to answer the research questions.

5.3.13 Questioning the competence of the teacher

5.3.14 Reason for low attendance in couching session

5.3.15 Less eradication of the fear of English by Non-CALL environment in comparison to CALL environment

5.3.16 Non-CALL environment as less motivator for the students in comparison to CALL environment

5.3.17 Students' desire for future classroom scenario

5.3.18 Improvement in the Reading skill

5.3.19 Improvement in the Writing skill

5.3.20 Students' preference for CALL class or Non-CALL class

5.3.13 Questioning the competence of the teacher

All the questions were based on MCQ format. For this question students were asked about the competence and capabilities of their teacher. Researcher himself taught the class and in order to escape from any issue questioning his competence, he included this question in post-research feedback questionnaire.

Fig. 5.3.13: Questioning the competence of the teacher

7
58%

Yes
No
To some extent
Not at all

2
17%

3
25%

0%
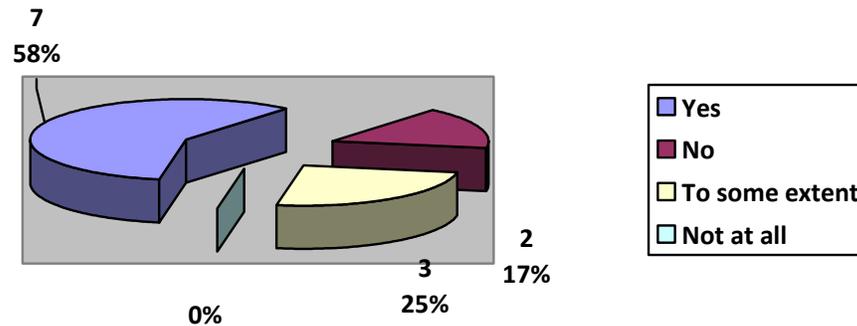
Q. Was the teacher competent who taught you in the couching session?

The analysis shows that 58% students strongly affirmed that the teacher was competent. 25% also extended the same answer but relatively with a weaker consent. It can be inferred clearly that 83% of the population was satisfied with the performance of the teacher.

5.3.14 Reason for low attendance in couching session

Another important question was to ask the students of Non-CALL class the reason for their low attendance in the couching session. Disclosing the details of their participation level in the class, the researcher proves that their accumulative attendance ratio was merely 49%. The same data from CALL class settles their ratio at 92%. This large difference constrains the researcher to search out the reason for this very low attendance by Non-CALL class. Figure 5.3.14 lays down the question and the relevant answers.

Fig. 5.3.14: Reason for low attendance in couching session
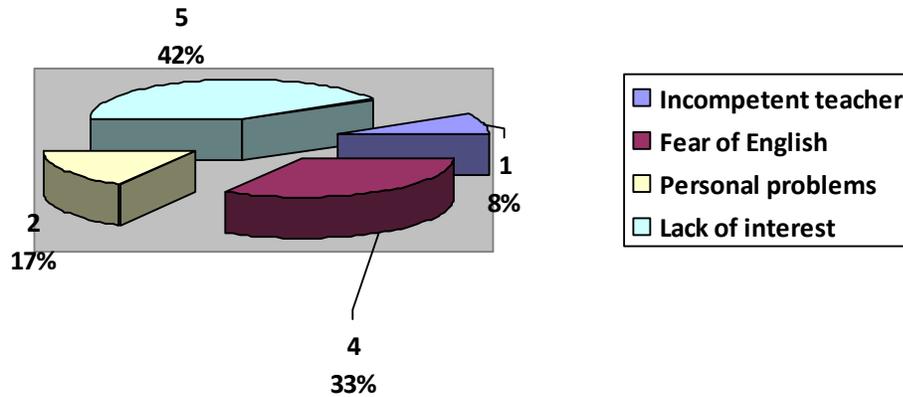
5
42%

Incompetent teacher
Fear of English
Personal problems
Lack of interest

1
8%

2
17%

4
33%

Q. Do you think that the reason for your low attendance in
the couching session was due to one of the following?

The analysis clarified that 42% students fully endorsed that the reason for their low attendance was the lack of interest and motivation towards the method adopted by the teacher. 33% referred the fear of English as a hurdle between them and the class. Hence 75% of the total population blamed lack of interest and fear of English as the main reason for their low attendance in the class.

5.3.15   Abundance of fear of English in Non CALL class

In pre-research questionnaire, in 4.2.3 students were questioned about the reason of their low attendance in the college class. 46% of the population considered the fear of English as biggest cause of their low interest in the class. 33% blamed both: less motivation level and fear of English. In post research questionnaire controlled group was again asked whether they still experience any fear of English. Figure 5.3.15 quantifies the say of the students by laying the question.

Fig. 5.3.15: Abundance of fear of English in Non CALL class
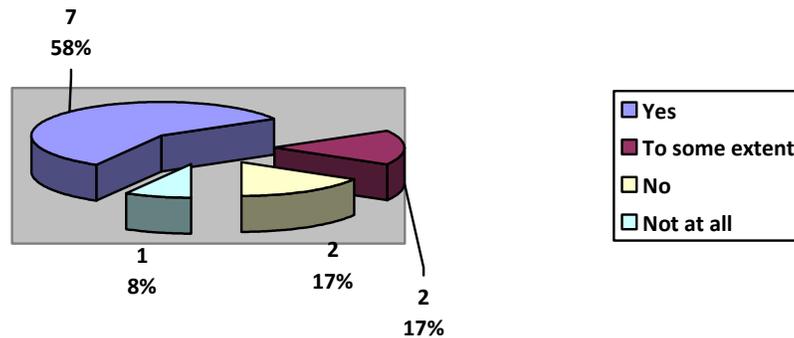
Q. Have you still any fear of English in your minds that you
mentioned in your pre-research questionnaire?

Discussing the details of the analysis, the researcher came to know that 58% of the population said that the Non-CALL class didn't play a satisfactory role in eradicating the fear of English. Further 17% also remained unsatisfied and stated that they still have fears to some extent. The analysis above shows that Non-CALL environment remained unsuccessful in eradicating the fears associated with English language.

5.3.16 Non-CALL environment as less motivational for the students in comparison to CALL environment

A very important question which has been answered quantitatively in 4.4 was also given place in post research feedback questionnaire. Students were asked about the increase in their motivation level towards learning English after the couching session. Figure 5.3.16 declares that a large number of the population affirmed that Non-CALL environment was unable to boost their level of interest and motivation.

Fig. 5.3.16: Non-CALL environment as less motivational for the students in comparison to CALL environment

2
17%

5
41%

2
17%

3
25%

Yes
No
To some extent
Not at all
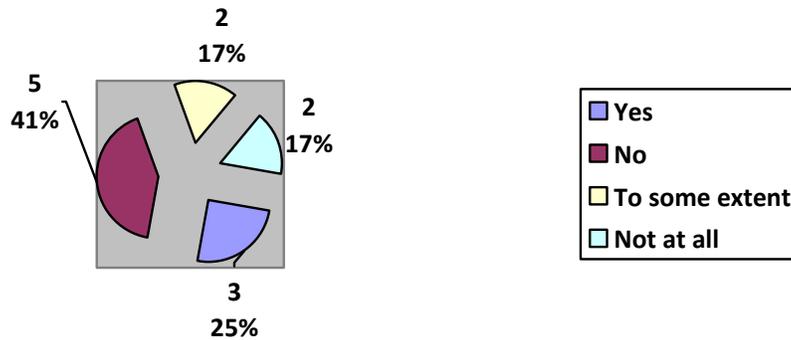
Q. Did you feel yourself motivated in the environment that was provided to you by your teacher through whiteboard lecturing method?

58% students observed that Non-CALL environment did not impart them a strong wave of motivation towards English language learning. Merely 25% of the population stated that Non-CALL environment kept them motivated and inclined towards English language learning.

5.3.17 Students' desire for future classroom scenario

Another important question asked was whether, in the future, students would appreciate any change in their classroom brought through CBMs. This was essential in case to judge the overall appreciation of CALL environment by the student.

Fig. 5.3.17: Students' appreciation of CBMs for future use in classroom.
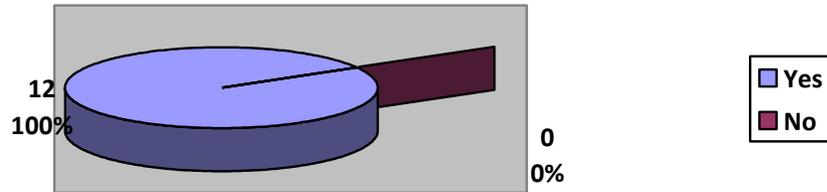
Q. Will you appreciate any change in your class
environment with the help of computer technologies at any
stage of English language learning in future?

The analysis clarified that 100% students fully endorsed the use of CALL environment in their future.

5.3.18   Improvement in the Reading skill

It is a truth nationally acknowledged that the Education system of the country merely focuses on the reading skill and the writing skill of the child. From primary to the highest level of education, listening and speaking skills are taken of no worth and hence are not evaluated at any level while on the other hand reading and writing skills are the part and partial of current CALP skills. Figure 5.3.18 analyzes students' answer about the improvement in reading skill. Earlier the same question was asked from the Experimental group.

Fig. 5.3.18: Improvement in Reading skill?
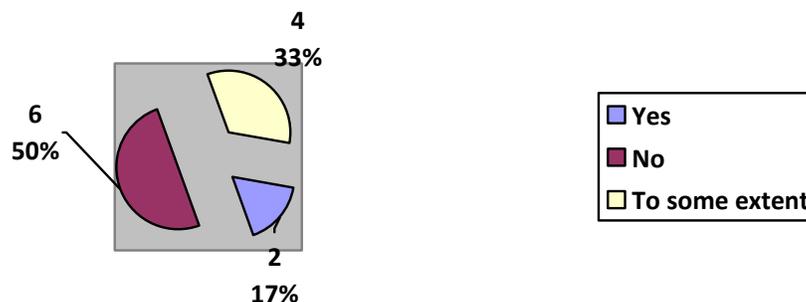
Q. Do you think that your Reading skill improved under the
influence of Non-CALL environment?

50% students confirmed that they felt no improvement in their reading skill under the influence of Non-CALL environment. The students negating the concept were only 17% while 33% population believed that their reading skill improved but to some extent.

5.3.19   Improvement in the Writing skill

A very important research question was to map quantitatively the change in the writing skill of the student with and without CALL environment. This question has been answered through a quantitative analysis of the data collected during the couching session in 5.1.1, 5.1.2 and 5.1.3. In order to know the perceptions of the students of Controlled group about this change expressing the relation between Non-CALL environment and writing skill, it was considered compulsory to include this question in this post-research feedback questionnaire.

Fig. 5.3.19: Improvement in the Writing skill
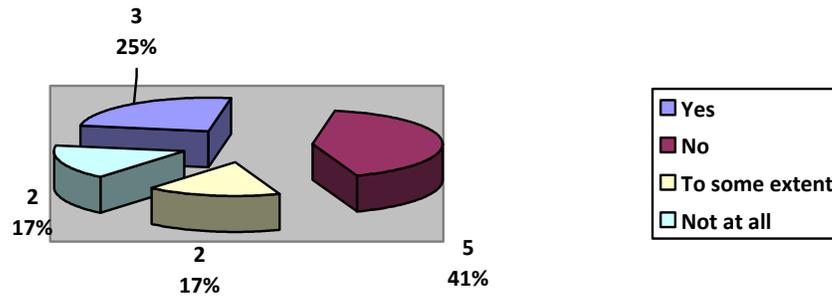
Q. Do you think that your Writing skill improved under the
influence of Non-CALL environment?

Discussing the details of the analysis, the researcher came to know that merely 25% students fully endorsed that they were conscious about the improvement in their writing skill under the influence of Non-CALL environment. 17% of the total population believed that it remained successful in nourishing their writing skill to some extent in CALL environment. 58% of the total population bluntly said that they received no improvement in their writing skill. Comparative analysis of the data has been carried out in next chapter in detailed discussion of the data analysis.

5.3.20 Students' preference for Non-CALL class or CALL class

Finally after the couching session, students were asked about their liking for CALL class or Non-CALL class. This question will surely sum up the whole story and will implicitly answer students' liking and disliking. The same question was asked from experimental group in 5.3.12. Here the figure 5.3.20 arranges the data and produces results collected from the controlled group.

Fig. 5.3.20: Students' preference for Non-CALL class or CALL class
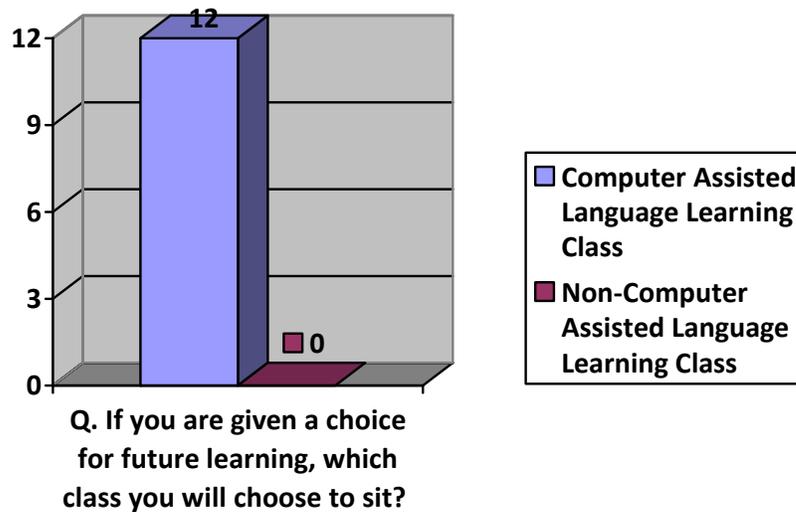
The analysis of the data shows that 100% of the population wished to sit in CALL class for future learning of English language.

5.3 (B) Discussion

Discussion hereafter will be based on the results analyzed in 5.3 (A). In this debate comparison between two different frames of mind will be highlighted; One before the implementation of CALL Materials and the other after implementation. For Experimental group, Computer Assisted Language Learning environment was furnished with all the possible equipment including multimedia. It was noticed that the satisfaction level of the students was high though it was difficult to achieve 100% in the city like Kot Adu. Of all the students there were few ones who did not improve much. It might possibly be due to several other reasons. One possible reason was that these students were already very less motivated and had a hostile attitude towards computer. Earlier in 5.2 (B), in pre research questionnaire, it has been discussed that students accused two main

factors for their low attendance and hence low performance. These two factors are given below:

i.   Fear of English

ii. Low Level of Interest

In post research questionnaire students of both the groups were again asked whether they still feel any fear of English. A clear difference of opinion was observed. Half of the population of experimental group stated that their minds were then free from the fear of English. It largely happened due to so many factors provided by CALL environment.

It was observed that CALL methodology not only assists the learner in improving marks but it also solves problems of attitude. Psychological distance between the target language and the learner was eradicated by the use of CALL environment. This experimental study had won the applause of the students as it made them confident and autonomous in their learning. Students and even College administration appreciated multiple modes of learning in CALL environment. One more reason for its appreciation by the students was the adoption of Learner Centered Approach (LCA) in Computer Assisted Language Learning. It was observed that the majority of students was feeling comfortable and due to this convenience they wanted to adopt it in their routine studies. In response to a question, most of the students wished for CALL methodology to be implemented in their class room for future. Students mentioned lack of equipment especially unavailability of personal computer at homes as a big hurdle in making

them autonomous learner so the students of graduation recommended CALL tools to be used on permanent basis.

Furthermore, they admitted that CALL environment provides a simultaneous improvement in all the four skills including Listening and Speaking. They found Computer Assisted Language Learning environment friendly and were inclined to participate consciously. The fear shown by the students in pre research questionnaire was overcome by the replacement of dry, boring and dull setting with more lively, interactive and active participative learning fundamentals brought into play by the CALL.

Finally in validation to the hypothesis, it can be stated that CALL methodology can reduce the number of failures in English at Graduation level in Pakistan. It is attraction enough to bring many less motivated students back to studies.

5.4 (A) Analyzing Motivation Level of the Students

One very important question related to the study was to find out the level of increase or decrease in the motivation of the students. The research question was:

● Does the use of CALL tools enhance the motivation level of the learners towards English language learning?

To answer this question researcher used following ways:

i.   Before the start of couching session students were directly asked few questions in pre-research questionnaire.

ii.   After the couching session students were again asked few questions in post-research feedback questionnaire.

iii. Class observation was made during the couching session by the researcher himself. To make this observation more objective, authentic and conclusive, quantitative data was collected. A daily attendance sheet of the students was maintained.

5.4.1 Daily Attendance Sheet of the Students (Comparison between attendance percentages of Experimental group and Controlled group)

It was quantitatively measured whether Experimental group shows more inclination towards English language learning or Controlled group. In simple words, the CBMs were tested for their capacity of enhancing motivation and interest among students for English language learning. Total research population

which comprised of twenty four students with same setting of two different environments was again the focal point in answering this question. During the couching session, despite continuous teaching, the researcher concurrently marked daily attendance of both groups. This attendance sheet provided the data whose analysis answered the concerned research question. Suggesting no cushion for biasness, this typical question was measured quantitatively. Table 5.4.1 arranges the attendance percentages of the students of Experimental group.

Sr. No.	NAME	Roll No.	Total Lectures	Attended	Attended %	Average % attendance of the class
	STUDENT'S ATTENDANCE REPORT					
	Monday, 02 May 2011 to Tuesday, May 24th, 2011					
	Experimental Group(CALL)			Lecture Timings: 8:30 am to 9:15 am		
1	Mujeeb ur Rehman	9001	18	12	67%	83%
2	Mahboob Hassan	9002	18	14	78%	83%
3	Muhammad Imran	9003	18	14	78%	83%
4	Muhammad Ramzan	9004	18	17	94%	83%
5	Muhammad Asif	9005	18	15	83%	83%
6	Ghulam Abbas	9006	18	11	61%	83%
7	Aamir Masood	9007	18	17	94%	83%
8	Azhar Hussain	9008	18	15	83%	83%
9	Muhammad Irfan	9009	18	18	100%	83%
10	Tanveer Abbas	9010	18	16	89%	83%
11	Muhammad Tariq	9011	18	14	78%	83%
12	Imtiaz Aziz	9012	18	16	89%	83%

Table 5.4.1

	STUDENT'S ATTENDANCE REPORT					
	Monday 2nd May 2011 to Tuesday, May 24th, 2011					
	Controlled Group (Non CALL)				Lecture Timings: 10:00 am to 10:45 am	
Sr. No.	NAME	Roll No.	Total Lectures	Attended	Attended %	Average % attendance of the class
1	Muhammad Sultan	1001	19	12	63%	54%
2	Ghulam Abbas	1002	19	13	68%	54%
3	Muhammad Naeem	1003	19	11	58%	54%
4	Fiaz Ahmed	1004	19	9	47%	54%
5	Muhammad Arif	1005	19	7	37%	54%
6	Mazhar iqbal	1006	19	7	37%	54%
7	M. Irfan Arshad	1007	19	13	68%	54%
8	Abdul Hafeez	1008	19	7	37%	54%
9	M. Amjad Rasheed	1009	19	9	47%	54%
10	Sabir Hussain	1010	19	15	79%	54%
11	Muhammad Mahboob	1011	19	10	53%	54%
12	Muhammad Irfan	1012	19	11	58%	54%

Table 5.4.2

The average percentages of both the groups clearly defined in the Table 5.4.1 and 5.4.2 have been further compared in Figure 5.4.1.

Fig 5.4.1: Comparison between attendance percentages of Experimental group and Controlled group

Average Attendance Percentages
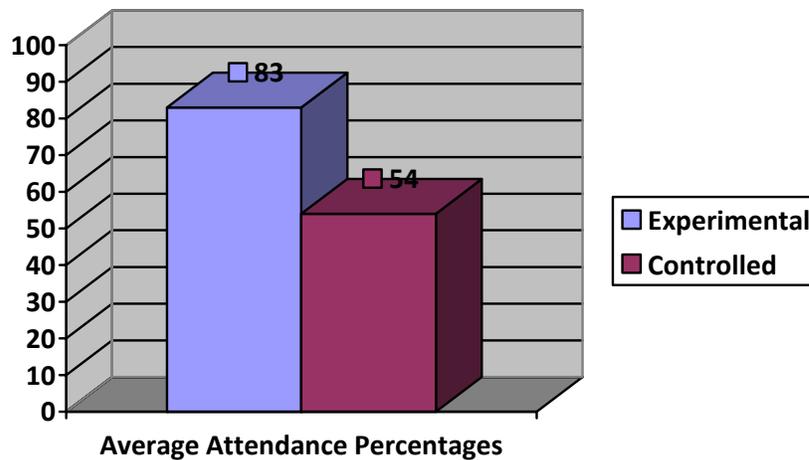
The involvement, interest and motivation of the students can surely be judged by mapping their number of appearances in the class. To know the motivation level of the two groups, the researcher separately managed the daily attendance sheets of the both groups during the couching session. Finally the

110

data analysis proved that CALL environment greatly enhanced the motivation level of the student towards English language learning.

5.4. (B) DISCUSSION

Under this heading, here will be discussed quantitative findings related to the measurement of the motivation level of the students. A clear distinction between both the groups was calculated. For Experimental group, Computer Assisted Language Learning environment was furnished with all the possible equipment including multimedia.

It was observed that CALL methodology not only assisted the learner in improving marks but it also solved problems of low motivation and interest and hence low attendance ration in our colleges. Psychological distance between the target language and the learner was eradicated by the use of CALL environment. This experimental study had won the applause of the students as it made them confident and autonomous in their learning. Students and even College administration appreciated multiple modes of learning in CALL environment. One more reason for its appreciation by the students was the adoption of Learner Centered Approach (LCA) in Computer Assisted Language Learning. It was observed that the majority of students were feeling comfortable and due to this convenience they wanted to adopt it in their routine studies. In response to a question, most of the students wished for CALL methodology to be implemented in their class room for future. Students mentioned lack of equipment especially unavailability of personal computer at homes as a big hurdle in making them autonomous learner. So, students of Graduation recommended CALL tools to be used on permanent basis.

Furthermore, they admitted that CALL environment provides a simultaneous improvement in all the four skills including Listening and Speaking. They found Computer Assisted Language Learning environment friendly and were inclined to participate consciously. The fear shown by the students in pre research questionnaire was overcome by the replacement of dry, boring and dull setting with more lively, interactive and active participative learning fundamentals brought into play by the CALL.

Finally in validation to the hypothesis, it can be stated that CALL methodology can reduce the number of failures in English at Graduation level in Pakistan. It is attraction enough to bring many less motivated students back to studies. Eventually the attendance ration of the class is improved due to the higher motivation and interest imparted by the CALL tools.

5.5 (A) Analysis of the Teachers' interviews

After establishing the efficacy of CALL materials, it was firmly recommended by the supervisor of this research that the research will not be over until the say of another very important stakeholder of the education system is not included. In any education system of the world, teachers are assigned a key role and are regarded as main stakeholders of that system. First of all a questionnaire was developed. The composition of the questionnaire and its rationale has been laid down in 3.5.2 at page 41. Questions were by default open-ended hence they initiated a deliberate debate from the side of the interviewee. Despite the questions, researcher also continually informed the respective teacher about the results of the research conducted earlier to check out the efficacy of CALL materials. Their already established inferences about CALL were also brought into question. It tried to establish whether the inferences of the teachers about their earlier use of technology endorse the results of this research or not.

i. Interviews

The specification of the population of teachers that was interviewed has already been discussed in detail in 3.3.2 at page 34.

The questions asked in the interview were same for all ten teachers. As per the nature of the interview, most of the questions were open ended. It provided the teachers an environment where they could say bluntly whatever they pleased. The interviews were conducted in English language. Each interview lasted between 15 and 20 minutes. The interviews were semi-structured and

were based on the following core issues. For ease of analysis, following important aspects in the data will be interpreted.

5.5.1 Earlier usage of CALL tools

5.5.2 Sufficiency of facilities

5.5.3 Appreciation of CALL as a substitution of current ways

5.5.4 CALL environment as a motivator for the students

5.5.5 Teachers' overall satisfaction towards CALL tools in enhancing four skills (listening, speaking, reading, writing)

5.5.6 Perceiving the use of CBMs: difficult or easy?

5.5.7 Questioning teachers' ability to use CALL equipment

5.5.8 Current NEEDS of the Teacher?

5.5.9 Teachers' reservations about CALL

5.5.10 Teachers' Preference for Non-CALL class or CALL class

All the interviews were recorded digitally in MPEG video format and were later transcribed for further analysis. Then these transcripts were deductively analyzed according to the pre-determined similar categories found in the questionnaire namely:

I.   The Present Situation and the Knowledge of CALL

II.   Gaps and Short-comings

III.   CALL as Solvent?

IV.   Reservations about CALL

I. The Present Situation and the Knowledge of CALL

Right in the start of every interview the teacher was asked about his familiarity with the term CALL, afterwards he was asked whether he ever used CALL tools in his classroom. In this phase following questions were asked:

5.5.1 Earlier usage of CALL tools

To explore the established history of CALL in the interviewee's mind, he/she was asked about his/her usage of CALL tools for teaching English language at any time in his/her career. Transcribed data helped the researcher to quantify the say of the teachers. Figure 5.5.1 gives the clear analysis of the data.

Fig. 5.5.1: Earlier usage of CALL tools
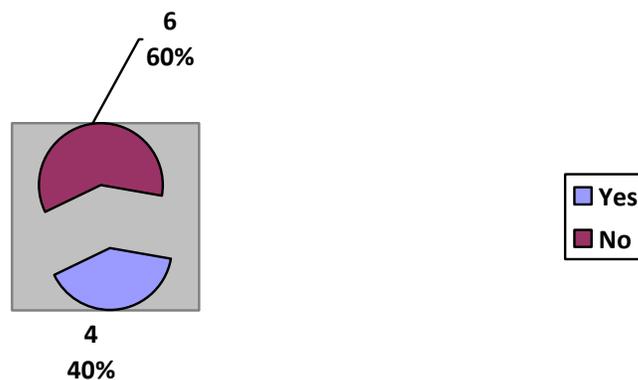
Q. Have you ever used computer hardware for English language teaching purpose?

60% teachers said that they had not practiced the integration of computer technologies in English language teaching. 40%, though unfamiliar with the term CALL, stated that they practiced on their own, the implementation of any CALL tool to teach English language. As one of the respondent said:

"Yes, I've great ideas about CALL because I've been doing this for a long time. I believe I got very good results out of this using CALL materials".

<div align="right">(Source of data: An interview with teacher B, my transcription)</div>

"When I was a student…. I was studying upto master level. I was not at any type of contact with CALL, but after…. when I joined PAF, they provide me much more opportunity of using CALL tools".

<div align="right">(Source of data: An interview with teacher E, my transcription)</div>

II. Gaps and Shortcomings

In this collection of questions, the teachers were asked about their satisfaction level with the current ways of language teaching. They were further asked about the gaps and shortcomings in the orthodox whiteboard lecturing method.

5.5.2 Sufficiency of facilities

Teachers were asked about the sufficiency of the facilities that are provided to them. 70% teachers were not satisfied with the situation and the provided tools to facilitate English language learning.

Fig. 5.5.2: Sufficiency of Facilities
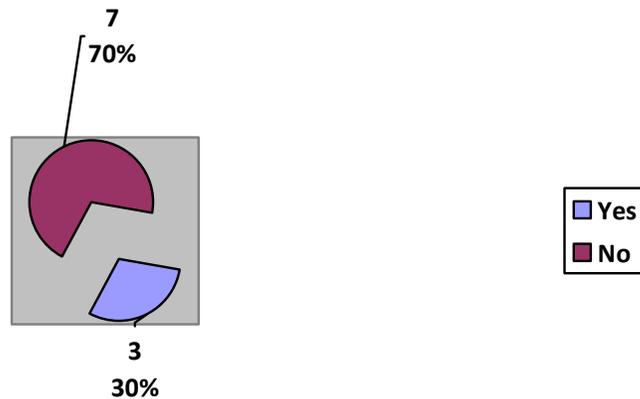
Q. Do you think that the facilities provided to you are sufficient?

The analysis clarified that the situation is critical because 70% population is not satisfied with the facilities currently provided to them. As one of the respondent said:

"In Govt. sector we are still using black boards and chalks in this post-graduate college. The situation is more than worse".

(Source of data: An interview with teacher B, my transcription)

III. CALL as Solvent

5.5.3 Appreciation of CALL as a substitution of current ways

As per the demand of the teacher, to substitute the current ways in language teaching, he/she was asked about the feasibility of CALL tools as invigilator of the change. 8 teachers, out of total population of ten, declared that they will appreciate the role of CALL tools in English language learning.

"Yes, I think the modern age demands us to see which method suits us. We must utilize these CALL tools in our education. We should not confine to the usage of white and black board".

(Source of data: An interview with teacher Ⅰ, my transcription)

Fig. 5.5.3: Appreciation of CALL as a substitution of the current ways
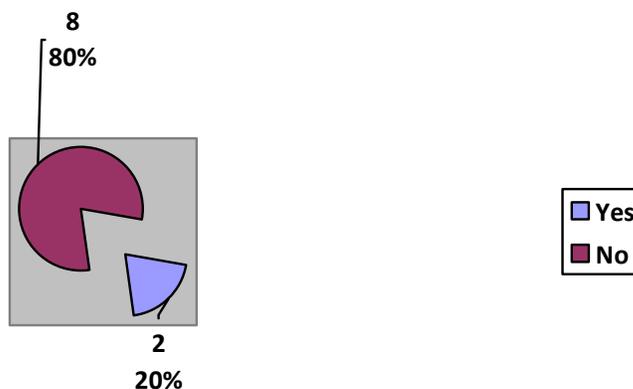
8
80%

2
20%

Yes
No

Q. Will you appreciate any change in your class environment
with the help of computer technologies?

80% teachers confirmed that they would appreciate any change in their classroom brought with the help of Computer technologies.

"Our teacher taught us English. He used multicolor chalks to demonstrate different clauses and phrases. That was too hectic for the teacher. Now we can use computers for this type of activities and this is more influential".

(Source of data: An interview with teacher C, my transcription)

5.5.4 CALL environment as a motivator for the students

A very important question which has been answered quantitatively in 5.4 at page 108 was also given place in post research feedback questionnaire filled by the students where students were asked about the increase in their motivation

level towards learning English after the couching session. In the interview the teachers were also asked the same question in order to add their approach towards students' behavior. Figure 5.5.4 declares that a large number of the population affirmed that CALL environment can greatly boost students' level of interest and motivation.

"It (CALL) is a modern thing. I've already experienced that such new things always capture the attraction of the students. They will develop an interest in it. Yeah… absolutely. It's my personal experience also".

(Source of data: An interview with teacher G, my transcription)

Fig. 5.5.4: CALL environment as a motivator for the students
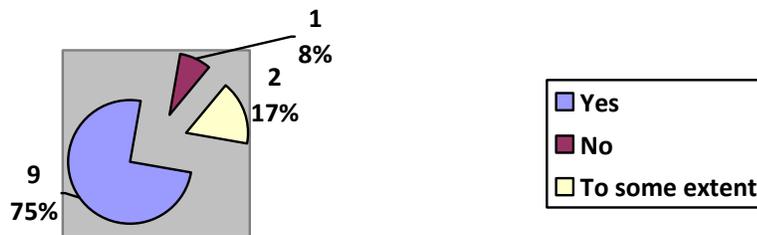
Q. Whether the induction of technologies and IT hardware will motivate the students for English language learning?

100% teachers assured that CBMs would impart students a strong wave of motivation towards English language learning. There was not a single person who negated the concept of motivation attached with CBMs.

"There is no other opinion. It certainly motivates when we have video clips. In fact, we also see characters in moving form belonging to the text of the syllabus. Certainly, our student gets motivated".

(Source of data: An interview with teacher A, my transcription)

"Computer technology is very useful just because when we want to demonstrate something, it is very useful. You can develop the interest of the student in language learning".

(Source of data: An interview with teacher F, my transcription)

5.5.5 Teachers' overall satisfaction towards CALL tools in enhancing four skills (listening, speaking, reading, writing)

The major research question of this study was the inception of the change among the students in their four skills. Teachers were asked about their general experience and inferences whether they felt the use of CALL tools beneficial for the improvement of all the four skills. Figure 5.5.5 gives a graphic representation to the teachers' say.

Fig. 5.5.5: Teachers' overall satisfaction towards CALL tools in enhancing four skills (listening, speaking, reading, writing)
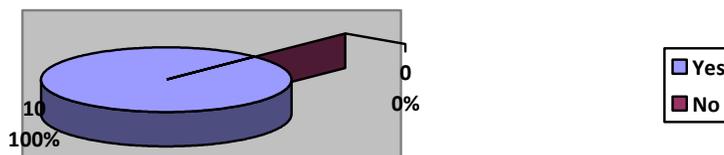
Q. Do you think these four skills can be learnt more speedily and accurately by studying our course materials through CALL environment?

The analysis of the data shows that 100% of the population affirmed that CALL environment enhances the speed of learning of all the four skills.

"Our current methods are not sufficient. I think…. New methods should be developed that could capture the interest of the student and CALL environment would be ideal for this. It will also enhance the students' learning of four skills".

(Source of data: An interview with teacher G, my transcription)

IV.   Reservations about CALL

5.5.6 Perceiving the use of CBMs: difficult or easy?

It was also to know whether the induction of CBMs in English language learning would be easy or difficult on the part of the teacher. The question was fairly answered in the interview. Figure 5.5.6 lays down the number of population, the question and their diversified opinions.

"I think if the teacher is capable enough to comprehend all these things and use the new material, he will come up with flying colors".

(Source of data: An interview with teacher G, my transcription)

Fig. 5.5.6: Perceiving the use of CBMs: difficult or easy
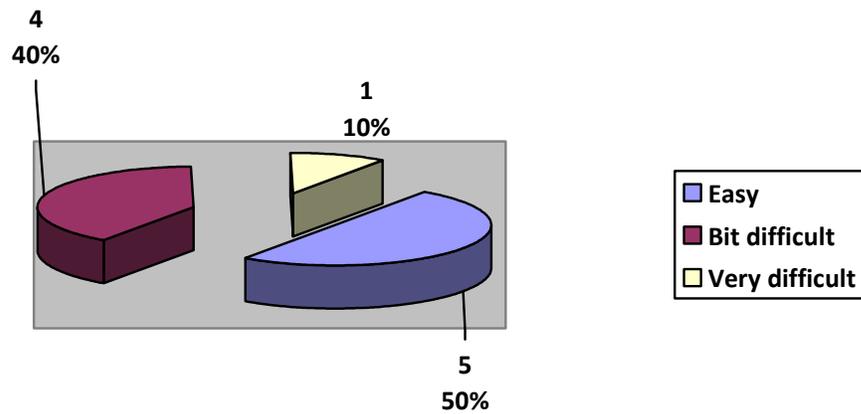
Q. How do you find the CALL approach towards English language
learning: an easy way or difficult?

The analysis confirms that half of the population is of the view that the integration of computers in English language is easy. 40% population bears the idea that learning English through CBMs is bit difficult. 10% recognized the use of CALL tools in English language learning as a very difficult one.

"I think…. motivation is concerned at each and every level. I don't think only students need motivation. Teachers also need inspiration and motivation. If a teacher is motivated and interested in all these things, it will be easy job for him. So far as I'm concerned, I think it is not at all painful. It is very easy and interesting thing".

(Source of data: An interview with teacher B, my transcription)

"It'll be very easy for the teacher as well as for student because if teacher is provided with material and proper guideline it will be very easy for the teacher".

(Source of data: An interview with teacher E, my transcription)

122

"Just I think there is a difference between something to be different and something to be needing hard work. If hard work is required for something then it doesn't mean that it is difficult. No doubt it is time consuming but we must be committed".

(Source of data: An interview with teacher J, my transcription)

5.5.7 Questioning teachers' ability to use CALL equipment

Teachers were asked about their ability of handling the CALL tools or equipment in the class. It was important to know as the research had proved the efficacy of CALL materials in improving the four skills among the students. Now rest is to uphold the implementation of CALL environment for English language teaching purpose and consequently, the tutor must be equipped with the ability to operate CALL tools. Teachers became themselves their evaluators.

"If you provide a helicopter to a man and ask him to fly it. It is not possible until proper training is given…… Same is the case with CALL and our teacher".

(Source of data: An interview with teacher G, my transcription)

Figure 5.5.7 lays down the number of population, the question and their diversified opinions.

Fig. 5.5.7: Questioning teachers' ability to use CALL equipment
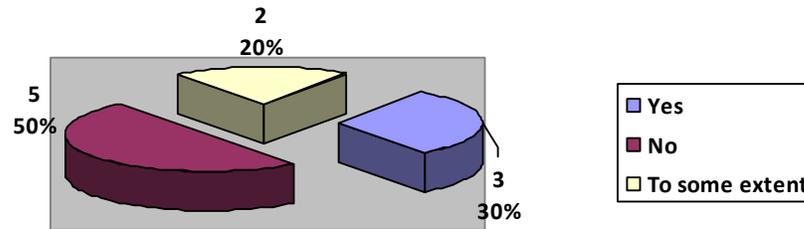
Q. If you are provided the CALL equipment, will you be able to use it properly?

The analysis confirms that 50% of the population fairly speaks out of their inability to operate CALL equipment while 20% declared that they know the basic operational myths of CALL tools but merely to some extent. 30% bluntly affirmed that they would be able to use CALL equipment easily.

"Yes, I personally feel the need of it……Today computer is in the use of every body. Normally……… most of people have personal computers. If we give the teacher programs…….. developed in an entertaining way, we can train the teacher".

(Source of data: An interview with teacher A, my transcription)

5.5.8 Current NEEDS of the Teacher?

As in 4.5.3 it has been established that 80% teachers regarded CALL environment as the best substitution of current ways in language teaching. Teachers were further asked about their needs as far as the equipment was concerned. They were given four choices. Figure 5.5.8 lays down the suggested choices and their appreciation by the teacher.

"If my classroom is concerned, I need first one thing is multimedia, a large screen devise to show one of your slides and videos. With the help of these things, I'll be able to teach my students in a better way. I think multimedia is sufficient to make the environment beneficial".

(Source of data: An interview with teacher B, my transcription)

Fig. 5.5.8: Current needs of the teacher
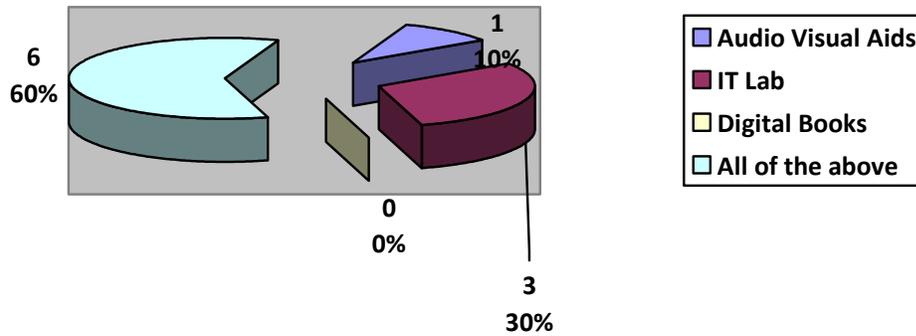
Q. What are your current needs?

The data analysis shows that 60% population demanded all the three choices offered: Audio Visual aids, IT Lab, Digital books. IT lab may be a proper solution in case to meet all the demands of the teachers.

"In such a department, we must have a language lab. Unfortunately, we don't have a language lab. If we establish a language lab in Govt. Emerson College, certainly, it'll boost up our process of language learning".

(Source of data: An interview with teacher A, my transcription)

"I think a language lab..... if provided…..would be an ideal one ".

5.5.9 Teachers' reservations about CALL

Teachers were asked about the constraints they were facing in adopting CALL tools for the teachings of English language. In the same debate, they were questioned about the constraints they associate with the building of the CALL environment in their classes then to onwards. The question was fairly and bluntly answered by the teachers. Figure 5.5.9 configures the number of population, the question and the diversified approaches of the population.

Fig. 5.5.9: Teachers' reservations about CALL
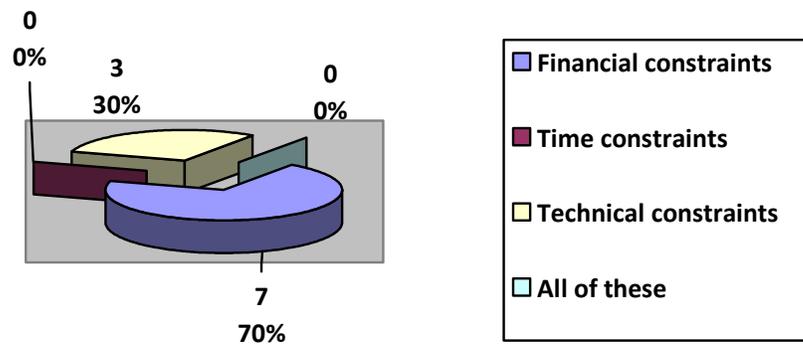
Q. What are your reservations about CALL?

The analysis confirms that 70% of the population is of the view that the largest hurdle in the implementation of CALL tools is the financial problem which rests with the both: themselves and the government. It was established by the analysis that the cost of CALL tools was not affordable for the teachers and further that the Govt. was not backing them because the efficacy of CALL materials for English language teaching purposes was yet not established in the books of the Govt.

30% teachers rebuked the technical constraint as a major hurdle in implementing CALL environment. Time constraint was no more considered a hurdle by anyone of the member of the population interviewed.

"Financial constraints are there. As tools like computers, multimedia that are costly things are not being provided by maximum institutes… colleges. At Govt. level colleges don't have proper equipment".

(Source of data: An interview with teacher F, my transcription)

"The fact is we don't have technical skill….. we don't have time. We can not develop such programs".

(Source of data: An interview with teacher A, my transcription)

5.4.10 Teachers' Preference for Non-CALL class or CALL class

Finally to give a conclusive end to the interview, teachers were asked about their liking for CALL class or Non-CALL class. This question surely summed up the whole story and explicitly answered teachers' liking and disliking. The same question was asked from the both groups of the students in 5.3.12 and 5.3.20. Here in figure 5.5.10 teachers' preference is analyzed for both CALL and Non-CALL class. The interviewee was put in an imaginary situation where he/she were to avail one choice while standing in a gallery on whose right hand there was a classroom fully furnished with CALL environment and turning towards left classroom will make him to deliver his/her lecture with the help of a white/blackboard and a pointer. Simply, teacher was to tell whether he would join Non-CALL class or CALL class.

"In Govt. sector we are still using black boards and chalks in this post-graduate college. The situation is more than worse".

Fig. 5.5.10: Teachers' Preference for Non-CALL class or CALL class
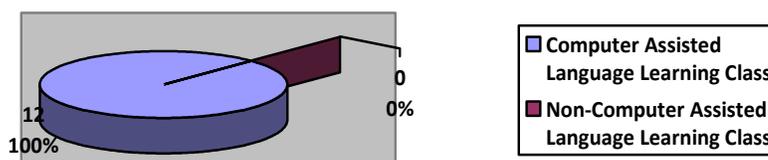
Q. If you are given the choice of selection, in which environment you
will feel comfortable?

The analysis of the data shows that 100% of the population wished to move right in CALL class for future teaching of English language.

"I'll not think even for a moment and I'll go for that classroom which is properly equipped with CALL tools".

On further asking the reason of this selection the esteemed teacher said:

"When I was taught by my teacher then certainly, I visualized the text…..
Similarly, when I teach my students, they also visualize the images that I develop in my mind in result of this visualization, may be different from the image that you are developing in your mind by listening to the same teacher and absorbing the same facts in your mind. So may be you are

128

right somewhere… may be I'm right somewhere… but… we'll be different at certain points.

If we've video clips before us, the certain images that have developed in the minds of you and me would be exactly the same. It means, it'll render us clarity and this is the main purpose of education. Education should not get us confused. It should render us clarity…… And if we absorb all these things in a clear way certainly our thinking becomes sharp".

(Source of data: An interview with teacher A, my transcription)

Another very prestigious teacher of Southern Punjab was interviewed and his say has also been recognized as valuable. On asking about his personal will in choosing between CALL and Non-CALL, he simply said:

"I'll prefer the class room with the CALL environment".

(Source of data: An interview with teacher B, my transcription)

On further asking to point out three major reasons for selection of CALL environment the teacher said:

"I think there are some basic advantages of using CALL environment because now we are living in 21st century. We should give it up all these old things because we have to coup with the new world and we should create a technology based classroom. The student may be…. can feel that he is part of this modern world and mentally he uplifts himself from a rural and backward background. He shifts himself upto a new and modern environment. So…. That's also a change not only in the physical concept but also we are changing mentally our student. We are giving them a

129

proper environment because the environment also plays a vital role in the development of character and personality.

And the second thing, the thing we are given to teach through CALL material, it'll be taught effectively and more properly. The results will be better than the class taught with simple way. Because as teacher, we have certain goals in our minds…. For example… we want to make up our student to get through the examination; they have clear ideas; they have really learned the thing we are going to teach them. And I think through CALL environment these objectives can easily be achieved as compared to the classroom that is lacking all these things."

(Source of data: An interview with teacher A, my transcription)

5.5. (B) DISCUSSION

After establishing the efficacy of CALL materials on the part of the students, it was also compulsory to talk to the teachers to have their say. It was observed from the interviews analyzed in 5.5 (A) that 60% of the teachers were unaware of the word of CALL and its application in modern classroom. 70% were unsatisfied with the facilities provided to them in the classroom to teach English at Graduation level. It correlated the problem with that of the students who were also unsatisfied with the current ways of teaching through whiteboard lecturing method. 80 percent of the population stressed the need of the change in current methods. Merely 20% resisted any change in current ways of English language pedagogy.

CALL Materials were fully certified by all the teachers for their role in enhancing motivation level of the students. This encouragement was more than

satisfactory. It further justified the research hypothesis. They were also of the collective opinion that CALL tools enhance the capacity of a learner in all four skills (Listening, Speaking, Reading, Writing).

Half of the population of the teachers mentioned that it would be an uneasy task for them to implement CALL Materials in the classroom. The reason they stated was the lack of ability to operate the tools. Teachers basically pointed out following reservations in their frank talk:

i.   Financial Issue

ii. Time Constraint

iii. Technical Expertise

It reflects the intense need to train the teachers. One of the teachers asserted this need in following words:

"If you provide a helicopter to a man and ask him to fly it. It is not possible until proper training is given…… Same is the case with CALL and our teacher".

(Source of data: An interview with teacher G, my transcription)

Finally, all the teachers preferred CALL Methodology for their future classroom over current ways of language teaching.

CONCLUSION AND PEDAGOGICAL IMPLICATIONS

6.1 Introduction

The study remained successful in answering all the research questions modernized in the start. It successfully marked the efficacy of CALL materials at Graduation level in Pakistan. Among the population of the research both, the students and teachers were included. The research remained fruitful in mapping the increase in motivation in the students of graduation towards their study of English. It also highlighted the impact of CALL environment on general ability of the students to gain marks in a reading and writing test. Further this research spotlights the general overview of the attitudes of the students and the teachers towards CALL methodology. The attitudes were found to be more inclined towards the need of the application of CALL tools.

Due to the multiple modes of learning in CALL environment, the motivation and interest among the students was high. The effect of the dramatized videos of the lessons can not be negated in boosting up the interest in English language learning. CALL environment covertly made the class punctual and regular. Due to this effect, experimental group came up with flying colors. It was observed that gradually as the couching session entered in the second week, students voluntarily started managing CALL environment e. g installing equipments etc. It simply concludes that CALL is more effective methodology to teach English at graduation level.

Learner Centered Approach (LCA) is characterized as an essential need of the day. Interactive learning is another concept which demands an active learner. Computer Assisted Language Learning fulfils the basic need of both the

concepts. It was endorsed in same letter and spirit in this study. It has been mentioned earlier that in order to complete all the credentials of CBMs required, to manufacture a high profile CALL environment, the general approach which was adopted was Student Centered Approach. SCA imparts autonomy in learning to the students. Due to this, the students warmly valued CALL methodology. Another reason which made the students to love this methodology was a new feeling of liveliness where they have been assigned a role. Then the boring, dry and dull environment was changed into interactive, participatory and excited one. The students had the opportunities for the self study not only in the class but also outside class which created confidence and autonomy among learners.

Teacher is the most important stakeholder of any education system in the world. Without his consent and guidance no change can even be suggested. The results of interviews with the teachers proved to be an optimistic sign for implementation of CALL tools at graduation level in the country. Teachers also whole heartedly welcomed the application of CALL methodology at Graduation level and even they demanded the equipment to initiate this method in near future. Although they have least exposure of it but still they wish to continue it in future, if provided with proper feedback. They strongly urged government to take special measures in the promotion of this methodology.

This methodology was also successful in finding an enhancement in marks of the students. Before the commencement of the study, students had equal knowledge as was clear from pre-test results. But just after the coaching of twenty days, there was found statistically significant difference in the marks of the

students of both groups which was the prime cause of the popularity and effectiveness of CALL methodology among students.

During the study, researcher had to encounter several methodological issues. Few came across while developing CALL materials. It was too hectic and time taking task which was accomplished in six months. Greater problems were faced during the implementation of the CALL Materials in the class. One of the problems was the unavailability of CALL tools. Researcher himself arranged the multimedia on rent for the first week. For the rest of the session computer lab was used. Immense power supply cut down, internet connectivity issues and often time consumption for the installation of CALL tools created problems in learning for the students.

In the end, it can be concluded that for the teachings of English at Graduation level, CALL proved to be an effective methodology. The study established the efficacy of CALL materials in their ability to produce results in all aspects of learning. Further it has opened new window of exploration for the future researchers. This efficacy of CALL materials can be measured on all levels.

6.2 Pedagogical Implications

Following pedagogical implications can be concluded on the basis of the findings of data analysis;

1. The study identifies the change among the students in motivation, interest and mental collaboration under the effect of two different environments; CALL and Non CALL. Present study confirms a positive inclination of the learners towards English language learning in CALL environment because

it helps in increasing the understanding, interest, motivation and marks of the students.

2. This study establishes CALL as an effective methodology to teach English language at Graduation level in Pakistan. CALL is effective because it presents the solution of ever-prevailing problems of attendance and classroom discipline. Largely these problems are faced in traditional methodology. CALL methodology uproots these problems hence it became popular among the students and the teachers. The promotion of this methodology will result in better proficiency of students.

3. For the implementation of CALL methodology, our students must be well equipped in the knowledge of operating computers. The present research proves the effectiveness of CALL as methodology. Before teaching them with CALL methodology, present study emphasizes the rudiments of the relevant knowledge of using computers for English language learning so that the students may not feel any problem in learning.

4. CALL methodology is highly appreciable due to its quality of imparting autonomy in learning to the students. Due to this fame, CALL methodology earns a big fame for itself. Learning is no more confined to the boundaries of the premises of the college. It always imparts confidence to the students while teaching through CALL tools. Students can learn lessons both inside and outside of college boundaries which develop confidence among students and enhance learner autonomy.

6.3 Recommendations for Future Research

It has been earlier proved in data analysis that CALL methodology plays an efficient role in learning English at Graduation level. Based on the findings of this study, following recommendations are made.

1. For the future researchers it is recommended that an investigation should be made to check out the efficacy of CALL Materials at other levels like intermediate, Matriculation, Secondary and Primary Levels. Moreover different groups of students should be worked out by following the same methodology. The groups may be divided on the basis of class, gender and age. The difference of impact of CALL Methodology on weak and bright students should be searched out.

2. A similar type of study should be carried out to check the efficacy of CALL Materials in raising the common learning stage for the students of different linguistic backgrounds and different cultures. The results would be the better answers to the questions raised against or in favor of CALL. It will also help in building such a CALL class room where the population from different linguistic and cultural origins would be equally benefitted.

3. New such research at any level should be practiced to recapitulate and verify the results of this research. Further the impact of CALL on Computer literate and Computer non literate people can be researched out. This will help in drafting the curriculum of Primary classes in order to make the students computer literate and hence to prepare them for CALL environment.

4. On the pattern of the interviews of the teachers conducted in this research same approach should be adopted to further research the reservations and issues present on the part of the teachers for the use of technologies. This research covered the opinions of only ten teachers.

5. Finally, a thorough research should be conducted to bring in front the attitudes and inclinations of the higher authorities that are controlling the education system of the country.

REFERENCES

Arikan, A. and Khezerlou, E. (2010). Prospective English language teachers' views on computer and paper-based instructional materials in developing language components. *Procedia Social and Behavioral Sciences, 2*, 4006-4009.

Al- Bureikan, A., O., I. (2008). *The effectiveness of CALL in the EFL Saudi female students' listening and speaking skills.* Thesis, (Masters').King Saud University, Saudi Arabia.

Bax, S. (2003) CALL—past, present and future. *System, 31,* 13-28.

Belcher, D.D. (1999). Authentic interaction in a Virtual Classroom: leveling the playing field in a Graduate seminar*. Computers and composition, 16,* 253-267.

Cohen, L., Manion, L. and Morrison, K. (6th ed.) (2007) *Research Methods in Education.* London: Routledge Press.

Chapelle, C.A. (2004). Technology and second language learning: expending methods and agendas. *System, 32,* 593-601.

Delcloque P. (2000 History of CALL Retrieved on March 11, 2011, from http://www.ict4lt.org/en/History_of_CALL.pdf

Dettori, G. and Lupi, V. (2010). ICT and new methodologies in language learning.*Procedia Social and Behavioral Sciences, 2*, 2712-2716.

Egbert, J., Paulis, T. M., and Nakamichi, Y. (2002). The impact of CALL instruction on classroom computer use: A foundation for rethinking technology in teacher education. *Language Learning and Technology, 6(3),* 108-126.

Erben, T., Ban, R. and Castaneda, M. (2009). *Teaching English Language Learners through Technology.* New York: Routledge Publishers.

Felps, D., Bortfeld, H. and Osuna, R.G. (2009). Foreign accent conversion in computer assisted pronunciation training. *Speech Communication, 51,* 920-932.

Ferreira, A. and Atkinson, J. (2009*).* Designing a feedback component of anintelligent tutoring system for foreign language. *Knowledge-based Systems, 22,* 496-501.

Figura K. and Jarvis, H. (2007). Computer-based materials: A study of learnerautonomy and strategies. *System, 35,* 448-468.

Jamieson, J. and Chapelle, C.A. (2010). Evaluating CALL use across multiple contexts. *System, 38,* 357-369.

Jarvis, H. (2005). Technology and Change in English Language Teaching*. Asian EFL Journal, 7,* 213-227.

Jia, J. (2009). CSIEC: A computer assisted English learning chatbot based on textual knowledge and reasoning*. Knowledge-based Systems, 22,* 249-255.

Higher Education Commission of Pakistan (2005-07) , Retrieved on January 11, 2011, from http://www.hec.gov.pk/insidehec/divisions/qali/call/pages/Default.aspx

Hegelheimer, V. and Tower, D. (2004). Using CALL in the classroom: Analyzing student interactions in an authentic classroom. *System, 32,* 185-205.

Hohle, J. (1997). Computer-assisted teaching and learning in photogrammetry. *ISPRS Journal of Photogrammetry and Remote Sensing, 52,* 266-276.

Hubbard, P. (1987). Language teaching approaches, the evaluation of CALL software, and design implications. In W. F. Smith (Ed.), *Modern media in foreign language education: Theory and implementation* (pp. 227-254). Lincolnwood, IL: National Textbook.

Jeng, Y.L., Wang, K.T. and Huang, Y.M. (2009). Retrieving video features for language acquisition. *Expert Systems with Applications, 36,* 5673-5683.

Kabata, K., and Yang, X. J. (2002). Developing multimedia lesson modules for intermediate Japanese. *CALICO Journal 19* (3), 563-570.

Kabata, K., Wiebe, G. and Chao, T. (2005). Challenge of Developing and Implementing Multimedia Courseware for a Japanese Language Program. *CALICO Journal, 22* (2), 237-250.

Khattak, Z. I., Abbasi, M. G., Khattak, B. K. (2010). Teachers' Professional Development in ELT at Tertiary Level: ELTR Project of the Higher Education Commission of Pakistan – A Case Study. *LANGUAGE IN INDIA Volume 10*

Lan, Y.U., Sung, Y.T. and Chang, K.N. (2009). Let us read together: Development and evaluation of a computer-assisted reciprocal early English reading system. *Computers and Education, 53,* 1188-1198.

Lee, K-W. (2000). English Teachers' Barriers to the Use of Computer-assisted Language Learning. *The Internet TESL Journal Vol. VI, No. 12, December 2000.*

Levy.(1997).*Computer assisted language learning: Context and conceptualization.*New York:Oxford University Press.

Liu, P.L., Chen, C.J. and Chang, Y.J. (2010). Effects of a computer-assisted concept mapping learning strategy on EFL college students' English reading comprehension. *Computers and Education, 54,* 436-445.

Liu, T.C. and Lin, P.H. (2011). What comes with technological convenience? Exploring the behaviors and performances of learning with computer-mediated dictionaries. *Computers and Human Behavior, 27,* 373-383.

Laghos, A., and Zaphiris, P. (2005). Computer Assisted/Aided Language Learning, *Idea Group Inc.*

Murray, G.L. (1999). Autonomy and language learning in a simulated environment. *System*, *27,* 295-308.

Nagata, N. (2002). An application of natural language processing to Web-based language learning. *CALICO Journal, 19* (3), 583-599.

Phillips, M. (1985). Logical possibilities and classroom scenarios for the development of CALL. In C. Brumfit, M. Phillips, & P. Skehan (Eds.), *Computers in English language teaching.* New York: Pergamon.

Richards, J., and Rogers, T. (1982). Method: Approach, design, and procedure. *TESOL Quarterly,16*(2), 153-168.

Shah, S. (2007). English Language Teaching at Intermediate Level in Pakistan : Vision and Reality. *Shaikh Ayaz International Conference – 2007.*

Underwood J. (1984) *Linguistics, computers and the language teacher: a communicative approach*

Warschauer, M. (2000). ''CALL for the 21st Century''. *IATEFL and ESADE Conference,* 2 July 2000.

Warschauer, M., and Healey, D. (1998). Computers and language learning: an overview *Language teaching forum*. 31, 57-71.

Yang, S.C. and Chen, Y.J. (2007). Technology-enhanced language learning: A case study. *Computers in Human Behavior, 23,* 860-879.

Zeng, G. and Takatsuka, S. (2009). Text-based peer-peer collaborative dialogue in a computer-mediated learning environment in the EFL context. *System, 37,* 434-446.

Appendix A: Pre research Questionnaire for Students

THE DEVELOPMENT AND
EFFICACY OF CALL MATERIALS AT
GRADUATION LEVEL
IN PAKISTAN

Researcher
Mr. Salman ul Waheed

Dear student

      I am student of M.Phil at the department of applied linguistics G.C University Faisalabad. I am conducting this research to find out the change in students' language proficiency and their motivation level in two different environments. One environment is known as CALL (Computer Assisted Language Learning) environment while other is created by orthodox whiteboard lecturing. You are requested to fill the questionnaire. I am thankful for your co-operation and time spared for this action.

Name…………………………………   Class | CALL | | Non CALL |

Roll No. (College)…………………..   Roll No. (Research Class)…………..

QUESTIONNAIRE

Q No. 1: Are you familiar with Computer Assisted Language Learning (CALL)?

      (a) Yes (b) No (c) to some extent

Q No. 2: Have you ever used computer hardware for English language learning purpose?

      (a) Yes (b) No

Q No. 3: Which method is being used currently by your teacher for English language teaching?

      (a) Whiteboard Lecturing Method (b) Audio Visual Method (C) Both of these

Q No. 4: What facilities do you have in your class room?

      (a) Black/White board   (b) Computers (c) Multimedia (d) Both a& b

      (e) Other…………………………………………………………………

Q No 5: As per the college record, the average attendance of your class is 56%. What the reason you highlight for this low attendance ratio?

      (a) Lack of motivation (b) Fear of English (c) Personal problems (d) both a and b

Q No 6: Whether you have any type of IT equipment in your classroom?

      (a) Multimedia (b) Tape recorder (c) Computer (d) None of these

Q No 7: Will you appreciate any change in your class environment with the help of computer technologies at this stage of learning?

      (a) Yes (b) No

Q No. 8: What's your opinion, whether proficiency level of English language learning will increase or decrease with the induction of Information Technology hardware in English language learning?

      (a) Increase (b) Decrease (c) No effect (d) don't know

Q No. 9: If you are provided CALL material and equipment, will you be able to use it properly?

      (a) Yes (b) No (C) Somewhat

Q No. 10: Do you feel the need of proper guidance to develop expertise for the use of computers in English language learning?

      (a) Yes (b) No

Q No. 11: What are your reservations about CALL?

(a) Financial constraints (b) Time constraints (c) Technical constraints (d) all of these

Q No. 12: Do you think that current language teaching methods are making you proficient in four skills (Speaking, Reading, Listening and Writing)?

      (b) Yes (b) No

Q No 13: Do you think these four skills can be learnt more speedily and accurately by studying our course materials through CALL environment?

      (a) Yes (b) No

Q No. 14: Do you think, by Computer Assisted Language Learning approach towards English language Learning, we can come up with easy techniques of learning?

      (a) Yes (b) No (c) Don't know

Q No. 15: Do you think that CALL environment will increase the motivation level of students towards English language learning?

      (a) Yes (b) No (c) Don't know

Q No. 16: If you were given the choice which class you would have chosen to sit?

      (a) CALL class   (b) Non CALL class

APPENDIX B: Post Research Questionnaire

PART I

Only for Experimental (CALL) Group

Q No. 1: Now after the couching session, do you think that you are familiar with

Computer Assisted Language Learning (CALL)?

     (b) Yes (b) No (c) to some extent

Q No. 2: Did this learning of course books through CALL environment appeal you?

     (b) Yes (b) No (c) to some extent

Q No 3: For English language learning, will you wish to have any type of IT equipment in

your classroom?

     (a) Yes (b) No

Q No 4: Will you appreciate any change in your class environment with the help of

computer technologies at any stage of English language learning in Future?

     (a) Of Coarse, Yes (b) Merely Yes (c) No (d) Not at all

Q No. 5: If you are provided CALL material and equipment, now will you be able to use it

properly?

     (a) Yes (b) No (C) Somewhat

Q No. 6: Have you developed expertise to use CALL materials for English language

learning?

     (a) Yes (b) No

Q No. 7: Do you think that your Listening skill improved under the influence of CALL

environment?

     (c) Yes (b) No (c) to some extent (d) not at all

Q No. 8: Do you think that your Speaking skill improved under the influence of CALL

environment?

     (a) Yes (b) No (c) to some extent (d) not at all

Q No. 9: Do you think that your Reading skill improved under the influence of CALL environment?

      (a) Yes (b) No (c) to some extent (d) not at all

Q No. 10: Do you think that your Writing skill improved under the influence of CALL environment?

      (a) Yes (b) No (c) to some extent (d) not at all

Q No 11: After the coaching session, do you think these four skills can be learnt more speedily and accurately by studying course materials through CALL environment?

      (b) Yes (b) No (c) to some extent

Q No. 12: How you found Computer Assisted Language Learning approach towards English language Learning, an easy way of learning or difficult?

      (b) Easy (b) bit difficult (c) very difficult

Q No. 13: Do you think that CALL environment boosted your level of interest in English language learning?

      (b) Yes (b) No (c) Not at all

Q No. 14: Did CALL environment played any role in increasing your motivation towards English language learning?

      (a) Yes (b) No (c) to some extent (d) not at all

Q No. 15: Have you still any fear of English in your minds that you mentioned in your pre research questionnaire?

      (a) Yes (b) No (c) to some extent (d) not at all

Q No. 16: If you are now given a choice for your future learning, which class you will choose to sit?

      (b) Computer Assisted Language Learning class

      (c) Non Computer Assisted Language Learning class

PART II

Only for Controlled (non CALL) Group

Q No. 17: Was the teacher competent who taught you in couching session?

  (a) Yes (b) No (c) to some extent (d) not at all

Q No. 18: Do you think that the reason for your low attendance in the couching session was due to one of the following?

  (a) Incompetent teacher (b) fear of English (c) personal problems (d) lack of interest

Q No. 19: Have you still any fear of English in your minds that you mentioned in your pre research questionnaire?

  (a) Yes (b) No (c) to some extent (d) not at all

Q No. 20: Did you feel yourself motivated in the environment that was provided to you by your teacher through whiteboard lecturing method?

  (a) Yes (b) No (c) to some extent (d) not at all

Q No. 21: Did you succeed in developing any interest for English language learning in the environment that was provided to you by your teacher through whiteboard lecturing method?

  (a) Yes (b) No (c) to some extent (d) not at all

Q No. 22: Now after the couching session, do you think that you are familiar with Computer Assisted Language Learning (CALL)?

  (c) Yes (b) No (c) to some extent

Q No. 23: Does this learning of course books through CALL environment appeal you?

  (c) Yes (b) No (c) somewhat

Q No 24: For English language learning, will you wish to have any type of IT equipment in your classroom?

    (b) Yes (b) No

Q No 25: Will you appreciate any change in your class environment with the help of computer technologies at any stage of English language learning in Future?

    (a) Of Coarse, Yes (b) Merely Yes (c) No (d) Not at all

Q No. 26: If you are provided CALL material and equipment, now will you be able to use it properly?

    (a) Yes (b) No (C) Somewhat

Q No. 27: Have you developed expertise to use CALL materials for English language learning?

    (a) Yes (b) No

Q No. 28: Do you think that your Listening skill improved under the influence of Non CALL environment?

    (d) Yes (b) No (c) to some extent (d) not at all

Q No. 29: Do you think that your Speaking skill improved under the influence of Non CALL environment?

    (b) Yes (b) No (c) to some extent (d) not at all

Q No. 30: Do you think that your Reading skill improved under the influence of Non CALL environment?

    (b) Yes (b) No (c) to some extent (d) not at all

Q No. 31: Do you think that your Writing skill improved under the influence of Non CALL environment?

    (b) Yes (b) No (c) to some extent (d) not at all

Q No 32: Which environment will you prefer to learn these four skills?

    (a) Computer Assisted Language Learning environment

(b) Non Computer Assisted Language Learning environment

Q No. 33: If you are now given a choice for your future learning, which class you will choose to sit?

(c) Computer Assisted Language Learning class

(d) Non Computer Assisted Language Learning class

APPENDIX C: Interview Questions (Teachers)

Q No. 1: Are you familiar with Computer Assisted Language Learning (CALL)?

(d) Yes (b) No

Q No. 2: Have you ever used computer hardware for English language teaching purpose?

(d) Yes (b) No

Q No. 3: What facilities do you have in your class room?

(a) Black/White board   (b) Computers (c) Multimedia (d) Both a& b

(e) Other………………………………………………………………

Q No. 4: Do you think that the facilities provided to you are sufficient?

(a) Yes (b) No

Q No. 5: Do you feel it better or useful for students to teach them language with the assistance of computers?

(a) Yes (b) No

Q No. 6: Whether the induction of technologies and IT hardware will motivate the students?

(a) Yes (b) No

Q No. 7: Will you appreciate any change in your class environment with the help of computer technologies?

(e) Yes (b) No

Q No. 8: Do you think that our current language teaching ways are appropriate in teaching language proficiency skills?

(a) Yes (b) No

Q No 9: Do you think these four skills can be learnt more speedily and accurately by studying our course materials through CALL environment?

(c) Yes (b) No

Q No. 10: Do you think, by Computer Assisted Language Learning approach towards English language Learning, we can come up with easy techniques of learning?

(c) Yes (b) No (Don't know)

Q No. 11: If you are provided this equipment, will you be able to use it properly?

(a) Yes (b) No (C) Somewhat

Q No. 12: If you are provided CALL material and equipment, will you be able to use it properly?

(a) Yes (b) No (C) Somewhat

Q No. 13: Will you need guidelines in developing expertise in building CALL environment by the use of CALL materials?

(a) Yes (b) No

Q No. 14: What are your needs?

(a) Audio visual aids (b) IT Lab (c) Digital books (d) all of these

Q No. 15: What are your reservations about CALL?

(a) Financial constraints (b) Time constraints (c) Technical constraints

(d) all of these

Q No. 16: Do you take the use of CALL a fruitful innovation or painful?

(a) Fruitful (b) Painful

Q No. 17: If you are given the choice of selection, in which environment you will feel yourself comfortable?

(d) CALL environment   (b) Non CALL environment

APPENDIX D: Pre Research Test

02-05-2011   **Pre Research Test**

English B.A
Research Venue: Govt. Degree College Kot Adu

Name………………………..

Total Marks 25

Question No. 1: Tick the right answer.   **(10)**
   (i)   The earth………. round the sun. (move, moves, moved)
   (ii)   I ……….. him only one letter up to now. (send, sends, have sent)
   (iii)   Ahmad and Akram ……. in Multan. (live, lives)
   (iv)   They …….. playing cricket …… 2001. (have been, has been)/
           (for,since)
   (v)   One of the windows is/ are open.
   (vi)   The contents of the box was/were thrown away
   (vii)   Someone has/have kidnapped the president.
   (viii) Cattle was/were driven hundred of miles.
   (ix)   She is the/an honest woman.
   (x)   Does the doctor give/gives medicine daily?

Question – 2:   Use following Homonyms in sentences of your own.   (10)

Berth   _____

Bridal   _____

Gait   _____

Heroin   _____

Cue   _____

Birth   _____

Queue   _____

Gate   _____

Bridle   _____

Heroine   _____

Question No. 3: Choose the correct preposition.   (05)

   (i) My friend met me …… the way. (in/on)
   (ii) I prevented him…….. smoking. (from/ in)
   (iii)She preferred her education …… her job. (of/to)
   (iv) You have a brain ………….. the two ears. (between/ among)
   (v) What do you feed your baby ……… (at/on)

APPENDIX E: Post Research Test

24-05-2011   **Post Research Test**

English B.A

Research Venue: Govt. Degree College Kot Adu

Name……………………….. Class | CALL | | Non CALL | Roll No…………………..

Total Marks 50

Question No. 1: Look at the passage given below and answer the questions that follow. Your answer should be around 70-150 words.   **(15)**

"Much more could be said about the artistic ability of the birds. There dancing is sometimes grotesque, often elegant. You recall the extraordinary scenes in Walt Disney's bird pictures in which happy couples, or even happy groups of birds, dance together in weirdly charming ballets. And certainly the most fundamentally beautiful thing about birds is their flight"

    (i)   Is the singing of the birds functional?

    (ii) "Birds look elegant in their special costume." Explain

    (iii) Describe the house building activity of the birds.

    (iv) Write a brief note on the birds' art of flying.

Question No. 2:   **(15)**

What were the main reasons for demanding a separate homeland for Muslims of India? Discuss in the light of Quaid-i-Azam's speech. "The Rationale of Pakistan"

Question No. 3:   **(10)**

Make a précis of the following passage taken from the lesson "A Visit to Swat Valley" and suggest a suitable title.

Wherever we turned, there were pictures, willows just coming into leaf, pale yellow rather than green, with dark trunks, bending over a canal, dark lines of trees across the lush green of the valley where the roads crossed and forked, clear streams in which the blue of the hills was reflected, the mustard fields still in bloom while in the Punjab they were only a memory, the wheat still young tiny new leaves and blossoms on the shisham trees, the Persian lilacs leafless with yellow berries from last summer shining against the blue of the sky, red poppies among the wheat and sometimes on the roofs of the houses, fresh snow even on the hills in the middle distance and villages clean and washed by the Tent rain and the white capped hills behind them. Every few miles there were quaint little forts each with four top-heavy towers, some of them, half hidden by the alder trees in the stream bed between the fort and the road, some standing starkly against blue and purple hills. On the road there were Gujar folk travelling, camped in the shelter of rocks, the women in their black garments walking behind the animals, great baskets on their heads and then we saw a pretty little girl among them with her arms fill of red poppies, Every now and again we came to a clump of olive trees and discovered that only in the graveyards did groups of these trees survive. The graves were often summon by sharp stones dug from the hillside, one for the head and one for the foot, often at an angle that suggested arms held wide, or even wings. Some of the olive trees dripped with

fresh mistletoes, the leaves of which were small and neat and pale green, a smaller variety than one usually sees. The hill tops were covered with Buddhist remains and all over the valley there were ruins from old monasteries and stupas and houses as if in this sheltered place time had stood still.

Question – 4: Fill in the blanks. (05)
1. John (become) ___ soldier last year.
2. Ahmad has been sleeping ___ (since/for) 5 p.m.
3. God (help) ___ those who (help) ___ themselves.
4. Two and two (make) ___ four.
5. Babar (write) ___ a letter to his uncle every week.

Question No. 5: Choose the correct preposition. (05)

(vi) My friend met me …… the way. (in/on)
(vii) I prevented him…….. smoking. (from/ in)
(viii) She preferred her education …… her job. (of/to)
(ix) You have a brain ………….. the two ears. (between/ among)
(x) What do you feed your baby ……… (at/on)