Benefits of CALL in ESL Pedagogy in Pakistan: A Case Study

Sadia Irshad *, Mamuna Ghani **

ABSTRACT: This paper reports the results of a case study carried out to investigate the benefits of CALL for ESL advanced level learners in Pakistan. The critical appraisal of the literature on CALL in Pakistani ESL perspective shows that only a few applications of CALL are employed due to inadequate technological facilities, and the lack of research. Keeping in view these constraints, this case study is carried out grounded on the research methodology on Multifaceted Pedagogical CALL Model: Computer as Mode (Irshad, 2008) for the development, implementation and evaluation of a reading comprehension courseware with the available technological and personnel resources. The study explored the pedagogical benefits and socio-cognitive factors of CALL courseware which positively affect ESL advanced level learners in Pakistan and evaluated the courseware’s compatibility to available machines and the personnel resources. The data comprises the field notes, observations and interviews’ scripts which support the working hypothesis that CALL courseware facilitates ESL learning.

Keywords: Computer Assisted Language Learning (CALL), individualized learning, bidirectional learning, socio-cognitive factors

Introduction

The present study proposes that in Pakistan the use of computers is beneficial in English as a Second Language (ESL) perspective. This postulation further implies that the use of computer technology is inevitable in every discipline including language pedagogy, for this digital media is hybrid of the properties of oral and written language in the contemporary educational scenario (Gee & Hayes, 2011). The computer technology has intervened the schools, colleges, universities, offices and homes that the language teachers must now begin to think of its utility in their own pedagogical regime (Warschauer, 1996). Thus, it is comparable to the idea that “this global trend has influenced all walks of life and the realm of English language teaching is no exception” (Javid & Farooq, 2015, p. 38). Alternatively, in Pakistan the major part of information regarding language is transmitted in a traditional lock step setting and is considered to be the most

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appropriate means of teaching and learning ESL. It is also a widely held belief among the teachers in Pakistan that the use of technology cannot become a part of teaching-learning scenario in general.

Therefore, the present study is an attempt to change this approach by highlighting the benefits and effects of technology-aided pedagogical practices for ESL pedagogy in Pakistan. In fact, this propensity towards technology implies that everyday language use is so much tied to the technology that the language learners are receiving input more through technology than any other medium (Chapelle, 2001). This language exposure is to English predominantly; although not for directly learning, to write papers, prepare subject related assignments, receive and send e-mails, chat via social media such as Face book, Twitter, What’s App and browse the World Wide Web. Thus, it is evident that language teachers of today can attempt to shape and transform the learners’ computer using experiences into English learning experiences.

In Pakistan, English, a foreign language, enjoys the status of a prestigious second language due to two vital factors. Firstly, English is a dominant second language in offices (Talat, 2002). Moreover, in educational institutions its dominance as a medium of instruction is obvious in the institutions of higher education and private schools. In addition, proficiency in English has been a key factor for seeking employment. Secondly, the rapid growth of English as a major medium and tool of digital communication around the globe has developed English as an International Language (EIL). Brown (2000) illustrates that the world wide spread of EIL has confused the previously distinct definitions of EFL and ESL, whereby learning ESL implies the social setting of a non-native English learner within a socio-cultural setting where English is a native language. On the other hand, EFL has been learned in a non-native socio-cultural setting. In Pakistan English is taught as a compulsory subject from early education; it is primarily a medium for acquiring higher education and a key factor in obtaining livelihood which is defined as an ‘instrumental function of English’ (Kachru, 1982). Moreover, the digital media has brought English into everyday communication. In such context, defining English as a second language is justifiable. Therefore, the acronym ESL is prevalent in the present research and most of the pedagogical researches on English in the country. This status of English and its link with technology implies that there is a need to explore benefits of technology i.e., computers and its language related applications i.e., CALL.

CALL promotes self-efficacy learning as it is based on the learning setting in which the lessons allow the learners to learn on their own pace. In this context, Levy (1997) describes CALL practice as “the search for and study of applications on the computer in language teaching and learning”
CALL involves pedagogues to create a classroom environment involving socio cognitive factors (as attitude, interest, motivation) of language learning with computer assistance, where the teacher is not only a facilitator, but a resource; and students get the opportunity to optimal individualized learning and interactive learning. In other words, CALL learning setting carries two important features: bidirectional (interactive) learning and individualized learning. Bidirectional or interactive learning is facilitated by computers’ assistance in the pursuit of language learning where the feedback system guides learners of language proficiency level. Individualized learning implies self-paced learning environment, which allows learners to work on their own individual pace. According to Warschauer & Healey (1998), CALL benefits teachers and learners as it provides opportunity to practice language learning activities with immediate feedback system, individualization in a large class, pair or small group work on projects, variety in the resources available, exploratory learning with large amounts of language data, real-life skill building in computer use and above all the fun factor. Therefore, this study aims at exploring the pedagogical benefits of CALL courseware for ESL learners and teachers; and how CALL courseware positively affects the socio cognitive factors of learning. Moreover, it addresses the question of compatibility of available technological and personnel resources to facilitate CALL practices in Pakistan in ESL perspective.

**Literature Review**

In order to place the hypothesis of CALL benefits, the following debate offers a critical review of the related literature hitherto been written on this particular subject to establish the notion that CALL in Pakistani ESL pedagogy, with respect to infrastructure, computer hardware and software, has been in evolution phase to date (Irshad & Mamuna, 2011). However, the current technology penetration scenario provides the opportunity to the English language teachers to incorporate technology in the curriculum and offered a ground to the ESL teachers and researchers to search for the implications and applications of technology.

The first evidence of technology into the ESL curriculum in Pakistan and beyond was Audio-lingual Method and in educational institutions’ infrastructure was the induction of language laboratories for facilitating ESL pedagogy. Meanwhile, behaviorist psychologists proposed conditioning and habit-formation models of language learning, which provided drill and practice technique to Audio-lingual Method (Stevens, 1989; Warschauer, 1996; Deleloque, 2000). In Pakistan the Audio-lingual Method was limited to a few prosperous public schools and language teaching institution. Teachers are placed in these laboratories without adequate training, not even a manual
on the lab’s feature and use. The teachers therefore had a negative experience with language laboratories which made them skeptical of experimenting with new technologies in the classroom. With ESL teachers struggling to find use of the technology they already have, it is unrealistic to expect them to quickly accept another use of modern technology-CALL.

Later, gradual induction of computer laboratories in educational institutions was a positive step towards educational technology and development of computer technology as mode that was underpinning CAI and CALL in ESL perspectives. A survey conducted to examine the computer facilities under Government of Pakistan (1999) brings into limelight that by the year 1985 forty-eight mainframe computers and fifty minicomputers were installed in public sector; and in private sector, eleven mainframe computers and fifty nine mini computers were installed. These computers were used in various sectors including education and research in educational field. Meanwhile, universities also established computer departments at the campuses, for example Quaid-e-Azam University Islamabad (2000) established The Department of Computer Science in 1976 and for that computer center was inducted four years back in 1972. It was ironic that while in 1980s microcomputers were quickly becoming the part of educational institutions worldwide (Sharp, 1996) yet in that era National Education Policies and Five Year Development Plans for education in Pakistan did not include computer education in the plans that delayed the use of computer in ESL pedagogy. The pioneering interest from the Government of Pakistan for the importance of computer in education sector was reflected in National Education Policy 1992 in the following words:

    All training programmes of teachers, and education administrators will include computer education as a compulsory component. Computer-aided instruction will be used as an important tool to enrich the teaching-learning process. (p.67)

National Education Policy 1998-2010 proved to be fruitful, particularly, to offer pedestal for implementation of locally developed CALL programs to suit the needs of ESL pedagogy in Pakistan. Moreover, Kronstadt (2004) illustrates that in July 2004 government of Pakistan's agreements were announced with private companies for providing computer education to all the public schools in Pakistan. This situation reveals the fact that the foundations for implementing CALL in ESL pedagogy is paved to perk it up further. Therefore, Higher Education Commission (HEC) of Pakistan has taken an important initiative by establishing a CALL subcommittee in 2005 of English Language Teaching Reforms (ELTR) committee, which is working to train the teachers to make use of instructional technology in ESL pedagogy.
The above discussion corroborates that the field of computer-aided teaching-learning is not mature enough in terms of theory and practice in Pakistan, therefore, the researchers and teachers have to rely on the researches conducted in the foreign countries (for instance Higgins & Johns, 1985; Chapelle & Jamieson, 1989; Blin, 2005; John & Wheeler, 2008) in order to design, develop, implement and evaluate a CALL learning programme or courseware. The present study theorizes that the foreign researches cannot cater to the actual needs of Pakistani ESL learners; however, the researchers in Pakistan can get support from the experience of foreign experts and also from Pakistani researches on CAI (see for example Tabbasum, 2004 & Mehmood, 2004).

The research design to study CALL programmes takes into consideration principles of language pedagogy, which are derived from learning theories belonging to three basic schools of thought-behaviorist, cognitive, and constructivist (see Warschauer, 1996 for details) - and second language learning theories such as Krashen’s Monitor Theory and provides an eclectic setting of application. In the present study, Multifaceted Pedagogical CALL Model: Computer as Mode (Irshad, 2008), based on the theoretical framework of constructivism, is adopted to explore pedagogical benefits of CALL.

**Research Methodology**

For the purpose of evaluating the benefits of CALL in this study we applied the Multifaceted Pedagogical CALL Model: Computer as Mode (see Figure I). This model helped to explore the benefits of CALL in the three-phase-study design: design and development phase, implementation of developed courseware followed by evaluation phase. This model anticipated that CALL courseware, “if designed and developed around socio cognitive conditions of second language teaching-learning would help and facilitate language learning; as language learning is a cognitive processing of acquired experiential knowledge from the society among already existed knowledge” (Irshad, 2008, p. 65). It addresses both cognitive and social aspects of language learning with the proposition that both separately cannot provide the adequate solution to comprehend the benefits of CALL to resolve the problems of ESL pedagogy. The social and cognitive factors of learning are addressed in the works of the proponents of constructivism: Piaget (1980) and Vygotsky (1978) whereby the rich theoretical foundation for learning in the “individual and social context” was provided (as cited in Levy, 1998, p.87). Nonetheless, Piaget differs from Vygotsky’s view of collaborative learning in a social context, by presenting the process of learning as individualistic process. Therefore, this model addresses social and cognitive conditions at one forum to develop an argument of the justification of
computer as a mode in ESL perspective for its benefits. As language learning is not an isolated phenomenon it is social and mental simultaneously thus model interlinks the socio cognitive conditions. The model emphasized the use of technology and learning content in keeping with the socio-cognitive factors of learning. The model demarcates that while developing a courseware, CALL practitioners arguably select language learning content, skills, mode of presentation, and then manipulate the content to create a courseware that would stimulate learner’s interest, motivation and attitude towards language learning.

**Figure 1:** Multifaceted Pedagogical Call Model: Computer as Mode

Source Irshad 2008:
Application of the Model

Design and development of courseware

In the first phase (see Figure 1) of application, Reading Comprehension CALL ESL Courseware in line with the model’s theoretical underpinning of socio-cognitive conditions detailed above. The courseware was developed assimilating available and accessible software applications for CALL to avoid complications. The content for reading activities is selected from on-line newspapers. The design of the courseware included generic software applications and CALL software applications (Davies et al. 2009). Generic software: Word processor: Microsoft Word was used to design 40% activities of the courseware. According to Verspoor and Cremer (2008) the main value of CALL comes from the use of ordinary applications, such as internet, text processors spell checkers etc. the development of courseware involved word processor combining hyperlink application so that learners can draft, critically and edit (Sharp, 1996). Further it added multiple media features of computers to combine text, graphics, and sound system. Thus, the courseware employed computer to be used as a tool, and tutor to stimulate learners’ interest with numerous reading comprehension activities like Unscramble the story, Prediction, Text quickies Scanning information, Gap filling, and Guess the title.

CALL software applications: content-free and content specific are programs designed in particular to support language learning which include a considerable interactivity and were the main focus of this CALL courseware. Davies et al. (2009) explained that CALL software applications “are designed to promote explicit or implied language learning objectives” (np). Therefore, Hotpotatoes 6 from Half-Baked Software was used to author 60% activities for the present study for using a simple authoring tool (Bangs, 2011) is both easy and effective. Hotpotatoes version 6 was downloaded free. Hotpotatoes constitute following text manipulation activities:

- J Mix is a text-reconstruction activity of jumbled sentences
- J Quiz was adopted to develop MCQs type activities (see Appendix A for an example).
- J Cloze was adopted to develop ‘Fill in the blanks.’ activities.
- J Match was employed to design matching exercises, by using text-text matching exercises and text-picture activities.

The authored Hotpotatoes activities are conducive to include content and media in keeping with socio-cognitive conditions of learning to enhance learning, for three pedagogical reasons. Firstly, Hotpotatoes allows self-paced
individualized learning through JMasher. Secondly, it allows combination of multiple media with colorful display that allows the authors to present authentic examples of English, thus, interest learners and is favorable to arouse positive attitude towards ESL. Thirdly, time limit and target to achieve better score develop sense of competition, and rewards the extrinsically motivated learners of the group. This Reading Comprehension CALL ESL Courseware, was then implemented in the next phase of the study.

Implementation

During the implementation phase (see Figure 1), the case study group of twenty advanced learners was taught English in through the designed Reading Comprehension CALL ESL Courseware was implemented. The data was collected during this phase to answer the following research questions:

1. What are the pedagogical benefits of CALL for ESL learners at advanced level in Pakistan?
2. To what extent is the designed Reading Comprehension CALL ESL Courseware compatible to available machine and the personnel resources in Pakistan?
3. What are the socio cognitive factors of Reading Comprehension CALL ESL courseware which positively affect ESL learners?

The subjects

The participants for this research were the group of twenty ESL advanced learners studying in a private sector institution. They range in age from 18-30 years. The one of the authors conducted this class who had teaching experience of over ten years. This class was chosen for this study because the authors had an access to this class, the computer lab was available for this class period, and the teacher was willing to incorporate Reading Comprehension CALL ESL Courseware. The teacher- a non-participant observer observed the class as whole, individual students, the interactions among students, and students’ communication with the teacher (i.e. the author performing the role of a teacher for this course).

Instruments for Data Collection

In order to study the subjects multiple sources and procedures were used to get comprehensive results on the benefits of CALL courseware (Javid & Farooq, 2015; Blin, 2005; Chapelle, 2001). To determine precedents of classroom activities and interaction patterns, various sources were used to collect data. Field notes and observations were penned down by the non-participant observer during the four weeks course. Moreover, semi-structured interviews of the learners and the teacher who observed the ESL class were administered at the end of the study period.
Setting: CALL ESL Class

To evaluate the designed courseware a classroom was set up which had a network of twenty IBM-compatible personal computers with Microsoft window7. U-shaped seating arrangement for the learners allowed individual learning; however, learners also worked in pairs which allowed collaborative bidirectional learning. The teacher’s table was placed in the centre near the front of the classroom to monitor, observe, calculate and assist the learners at multiple levels.

Data Analysis

Evaluation

At the evaluation phase (see Figure 1), the collected data was evaluated to analyze the role of the teacher and learners’ performance to ascertain the pedagogical benefits of CALL courseware. Throughout the data collection process of the case study, the field notes and observation transcripts were revisited in accordance with the research questions (mentioned above) of the present study. This analysis led to code categories and subcategories, whereby the two basic categories were role of the teacher and performance of the learners. Subcategories were based on the concepts outlined in the three research questions.

Pedagogical Benefits of CALL

The analysis of the data showed the pedagogical benefits of CALL for ESL learners at advanced level in Pakistan. In CALL class teacher was not only a facilitator but computer facilitated her role as a teacher. Hubbard and Levy (2006) has described four different roles of a teacher incorporating CALL in the curriculum: practitioner, developer, author and trainer. The observations during implementation phase indentified CALL teacher as a multi-tasking pedagogue- an author of courseware, a facilitator, a resource and guide promoting beneficial pedagogical environment and getting facilitated. The excerpts in Table 1 from field notes and observations illustrate the role of the teacher and effects on learners’ performance.
### Table 1

The Pedagogical Benefits of Call

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<tr>
<th>Role of the Teacher</th>
<th>Field notes</th>
<th>Observations</th>
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<tbody>
<tr>
<td>&quot;After defining the task for the day T guided the students on navigation of the task on computers. Ex.1- Unscramble the story on word processor. T assisted L18 who was struggling with the keys.&quot; [D1. August, 11, 2014]</td>
<td>&quot;T being the author of the courseware was quite comfortable with CALL programme. T appeared as a facilitator and guide.” [D1. August, 11, 2014]</td>
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<table>
<thead>
<tr>
<th>Learners' Performance</th>
<th>Field notes</th>
<th>Observations</th>
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<tbody>
<tr>
<td>&quot;L17 wrote grammatically incorrect sentence on Text Quickies but the moment system warned he took help to correct the sentence. L18 ask the T for the meaning of a word. T directed attention to synonym help. It worked and latter was found to be using it often. [D5. August 15, 2014]</td>
<td>&quot;Ls focused on the structure of language due to the automated checking system of programme.” [D5. August, 15, 2014]</td>
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<tr>
<td>&quot;L15 has finished much earlier and now repeating the exercise to improve scores. L13 has gained better scores on JCloze” [D15. August 29, 2014]</td>
<td>Ls performance is consistently and gradually improving in comprehension. [D17. September 2, 2014]</td>
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*L: Learner; T: Teacher; D: Day

The transcribed field notes and observations (See Table 1) substantiated that CALL courseware aided the learners to develop language skills. The learners made progress in comprehension skills with the developed Reading Comprehension CALL ESL Courseware. It provided sufficient opportunity for improving comprehension skills, as it benefited both the low achievers and high achievers to pursue learning via computer in an individualized self-directed environment (see Table 2). Furthermore, the analysis testified that the CALL ESL courseware had language learning potential. In consonance to this, Chappelle (2001) opines that, the language learning potential and focus on form of the language are the major traits in analyzing CALL courseware. The case study observations revealed that CALL activities provided the opportunity to understand not only the meaning of reading passages but to focus on form and structure of language. The learners were found actively engaged in learning ESl skills utilizing
computer as a tool for synonyms, spell-checking and grammar-checking for composing answers. Moreover, in word processor the established hyperlinks helped the learners in solving tasks. The analysis of the observations uncovered that the learners developed language skills by taking guidance from computer in solving reading comprehension exercises as the activities of Hotpotatoes 6, offered them assistance in the form of ‘clue’ and ‘hint’.

Moreover, the analysis of Question 1 of semi-structured learners’ interview found pedagogical benefits of CALL courseware. The designed courseware prompted the language learning skill development through Reading for Comprehension, Reconstruction of the Story, and Summary activities. The analysis of the Question 1 revealed that learners found computer helpful in developing ESL skills. Following are some of their direct comments to Question 1: “Do you think computer helps you to learn correct English? If yes, in what way? If not, please give reason”:

L4 “It helped me to develop correct sentences of English. My mistakes were automatically pointed, and then I corrected them. Sometimes a suggestion was given by the System but most of the time I had to repeat to get rid of errors.”

L8 “Yes, it helped me. I think my understanding of English has improved a lot.”

The semi-structured interview transcripts of the teacher revealed that ESL advanced learners gained pedagogical benefits. The teacher’s direct response to the Interview Question 1: “Do you think that the learners have improved language skills after the course and CALL ESL courseware? If yes, in what way? If not, please give reasons.” is quoted below:

I saw the learners showing improvement in organizing sentences, and developing understanding of the structure of language with reading comprehension CALL ESL courseware. It included the activities with a degree of opportunity where system provided assistance on grammar check and spell check.

The learners mentioned in interviews that CALL courseware enabled them to know their language learning weaknesses better than would be possible in a traditional classroom. Moreover, learners have identified computer an efficient tool for the ESL learning and teaching and were eager to learn through this modern mode for developing the language skills and achieved proficiency in English.

**Compatibility of Courseware to Available Resources**

The analysis of the collected data showed that the developed *Reading Comprehension CALL ESL Courseware* was compatible to the available computer technology; and learners did not find any technological hindrances
in solving designed activities. In addition, the analysis of field notes determined that the available hardware and software were compatible to reading comprehension activities. The study also identified that the designed CALL program accounted for Chapelle’s (2001) ideal of practicality in terms of ease of use of technology within the particular constraints of a class or language program. The analysis of the field notes and observations demonstrated (see Table 2) that CALL courseware manipulated the available computer technology as such to make it an effective mode of transforming and facilitating second language learning endeavor into an interactive or bidirectional, and individualized process.

### Table 2
Compatibility of Courseware to Available Resources

<table>
<thead>
<tr>
<th>Field notes</th>
<th>Observations</th>
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</thead>
<tbody>
<tr>
<td><strong>Role of the Teacher</strong></td>
<td><strong>Observations</strong></td>
</tr>
<tr>
<td>“T manually copied the courseware into all 21 systems present in the class. It did not take longer time. T called Lab attendant for once to seek assistance on electricity connection and later for a programme uploading problem on one system…” [D0. August 8, 2014]</td>
<td>“T did not find any difficulty in storing data on computers. The Systems in the lab supported the programme except in one case… That too was sorted out by the staff present.”[D0. August 8, 2014]</td>
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<tr>
<td><strong>Computers</strong></td>
<td>“T and Ls switched on the computers, and the programme greeted them. Programme ran smooth on the systems…” [D1. August, 11, 2014]</td>
</tr>
<tr>
<td><strong>Learners’ Performance</strong></td>
<td>“L20 stuck on a ‘page’ and asked T for help. T shut down the computer. Later switched it on and showed the right way to proceed. [D5. August, 15, 2014]”</td>
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*L: Learner; T: Teacher; D: Day

The analysis of Question 2 of the semi-structured learners’ interviews ascertained the compatibility of developed CALL courseware with the available technological and personal resources, “Do you find it easy to handle computer to do ESL tasks? If yes, in what way? If not, please give reasons.” Some of the direct comments of learners are quoted below:

L3: “It was easy to use computer for English learning. I had never done anything like this before but I did not find it difficult.”
L12: “Computer really helps me to develop the understanding of reading passages without the help of teacher. I did it by using synonym help easily.

The Question 3 of the semi-structured interviews of the learners gathered the data to ascertain the compatibility of developed CALL courseware with the available technological and personnel resources, “Do you find the teacher’s guidance helpful in CALL class? If yes, in what way? If not, please give reasons.” The analysis revealed that learners found computer an efficient assistant in understanding reading comprehension tasks; and the teacher- a resource person and a facilitator providing assistance in technology usage. For example:

L10: “I think the teacher guided me very well wherever I needed guidance.”

L14: “I found teacher helping me out in the problems of computer applications and language understanding.”

The Teacher responded to Question 2: Do you find the CALL ESL class compatible to the present technological and personnel resources? If yes, in what way? If not, please give reasons, as:

“I think CALL really helped the learners. The hardware and software were easy to use. It was clear that the learners don’t know anything about CALL initially but computer helped them. And I observed learners engaged in doing activities with the assistance of computer comfortably later. I found the teacher as more of a facilitator than lecturer. The teacher was busy throughout in aiding and supporting learners learning process of English through computer.”

Effects of CALL ESL Courseware

This section of the analysis explores the socio-cognitive factors of Reading Comprehension CALL ESL courseware which positively affect ESL learners. The earlier researches in the field of CALL pointed that it is desirable that the CALL activities and tasks have a positive impact beyond language learning potential, besides it should engage the second language learners to learn language beyond classroom (Chapelle, 2001). It is revealed from the analysis of field notes (see Table 3) that the collaborative learning environment emerged, where learners consistently worked together and with the teacher.
Table 3
Effects of CALL ESL Courseware

<table>
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<tr>
<th>Role of the Teacher</th>
<th>Field notes</th>
<th>Observations</th>
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<td>“T introduced the JMasher’s use... L3 needed more help. T assisted the Ls to proceed with the activities. T sat with L7 and guided attention to help keys of the programme to solve JCloze activity.” [D6. August, 18, 2014]</td>
<td>“T created the collaborated environment of learning.” [D6. August 18, 2014]</td>
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<td></td>
<td>“T allowed the learners to carry on with the classroom discussion.” [D17 September 2, 2014]</td>
<td>“T created the comfortable environment of learning which brought about positive results” [D12. August 26, 2014]</td>
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<table>
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<tr>
<th>Learners’ Performance</th>
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<td></td>
<td>“L 12 was found too engrossed in Prediction task story that when L13 seated next to him asked for help L12 did not listen at first.” [D8. August, 20, 2014]. “L11, after finishing reading of the article on food, dragged L13 sitting next to him into conversation. This led to the cycle of classroom discussion.” [D17. September 2, 2014]</td>
<td>“L 15 found the article selected for Comprehension task interesting.”[D3. August, 13, 2014] “Ls collaborate with each other in solving Text Quickies.” [D5. August, 15, 2014]</td>
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<tr>
<td></td>
<td>“L15 was quick at JMasher than word processor activities. L13 confidently proceed with activity, whom I had always found weak learner” [D15. August 29, 2014]</td>
<td>“Ls showed confidence in learning new skills. JMasher was found to be conducive in motivating the Ls.”[D18. September 3, 2014]</td>
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</table>

*L: Learner; T: Teacher; D: Day

Moreover, the analysis of the observations (see Table 3) indicated that the designed courseware provided experiential practice of second language knowledge through the use of authentic material. The use of authentic materials helps in enhancing language understanding of ESL advanced learners. Authenticity of courseware ensures the degree of correspondence between the designed learning activities and use of English out of the classroom. The interpretation of the semi-structured interviews of the learners uncovered that learners had positive experience in the class. The findings of the semi-structured learners’ interview are presented below in the form of the direct comments of learners in response to Question 4: Do you think computer helps you to learn strategies to learn English? If yes, in what way? If not, please give reasons.

L7 “I think I have learnt how to construct correct sentences of English.”
L11 “The activities that included reading passages from newspaper helped me to learn more about English. I learn taking help of computer for making my English good.”

Similarly, the results of the teacher’s semi-structured interview established the view that the teacher and learners had a positive experience with CALL. In this context, teacher’s response to Question 3 is presented below: “Do you think learners and teachers have a positive learning experience with technology through CALL ESL courseware tasks? If yes, in what way? If not, please give reasons.”

Yes, I must say that the students and teachers have a positive learning experience in CALL class. The learners uncovered the ways to learn English through computer. A teacher needs sense of achievement at the end of every class and here I witnessed that.

The analysis of field notes showed that the learners were motivated to learn language, for technology had inherent attraction for learners. Thus, it enhances learners’ achievement by accelerating language acquisition. CALL tasks encouraged collaborative learning environment by allowing greater interaction between teacher and learner and among peers and minimize language learning anxiety and boosted self-confidence of ESL learners. The degree of correspondence between the learning activity and target language activities of interest to learners out of the classroom had ascertained the authenticity (Chappelle, 2001) of tasks.

The review of the learners’ interviews brings to lime light vital findings to substantiate the stance that computer creates a motivating environment. In this context, it is important to note that the learners stated that one major benefit of the computer-assisted learning was the opportunity to navigate individually without the teacher. This in turn enhanced the confidence of the ESL learners and provided them comfortable environment. Question 5 asked: “How did you find CALL courseware for teaching English?” Following are their some of the direct comments:

L4 “I found CALL interesting way of learning.”

L13 “I felt comfortable in CALL class.”

L15 “Reading English was never such a fun.”

The advanced ESL learners showed awareness of growing technological inventions; the learners realized the importance of being comfortable with technology. In order to ascertain advanced ESL learners’ performance the data obtained through semi-structured interview was analyzed and interpreted. The analysis revealed that during the course of CALL course period many advanced ESL learners commented that it was a good new experience to learn language through computer. The data collected
through the semi-structured learners’ interview in response to Question 5: “Do you like learning English in CALL class? If yes, give the reasons. If not, please give reasons.” gathered positive responses. The following are some of the direct responses:

L15 “I like CALL class very much. I like doing English reading activities on computer.”

L12 “Yes, because I feel good to learn English by using computer on my own.”

Clarke (2001) believes that computers do not make judgment if learners make many attempts to understand the context, this encourages a learner. In response to Question 4, “Is CALL ESL class capable of motivating the learners and keeping their interest intact? What is your opinion?” The teacher replied:

“…The way the reading material is presented through computer, enhanced motivation level of students. I did not find any of the learners yawning… They all were enthusiastic to learn English… I found them relaxed.”

The interviewee’s response affirmed that the courseware presented the reading material in a way which was inherently motivating and kept the learners interested.

Findings

The study found pedagogical benefits of CALL for ESL learners at advanced level in Pakistan. CALL ESL courseware enhanced learners’ language skills. The analysis of the observations demonstrated that the computer helped the learners, wherever the learners got stuck with reading comprehension. The computer provided the ready assistance in finding synonyms of the difficult words to facilitate language learning. The Word processor activities supplemented a number of language-learning objectives as it provided spell-check, grammar-check and synonym assistance. The learners mentioned that CALL courseware enabled them to know their weaknesses better than would be possible in a traditional classroom.

The study of CALL class demarcated the compatibility of designed Reading Comprehension CALL ESL Courseware to available machine and the personnel resources in Pakistan. The learners found computer an efficient assistant, which helped them understand reading comprehension tasks; and the teacher- a resource person and a facilitator providing assistance in technology usage. The analysis of the data put forward that in CALL class the role of the teacher moved from the information transmitter and lecturer to the facilitator. In addition, the learners practice language without the fear of teacher’s comments as most of the activities provided automatic help in the form of ‘clues’ and ‘hints’. Furthermore, learners tackled more language
learning activities than those allowed in traditional classroom. The learners solved reading comprehension activities with ease due to the ready assistance of computer. The nonparticipant teacher identified that the teacher acted as a facilitator and supporter who collaborated in acquisition of English.

The case study outlined confidence, interest, positive attitude, interest and motivation as the defining socio-cognitive factors of Reading Comprehension CALL ESL courseware which positively affected ESL learners. The analysis of the data collected demonstrated that the learners took keen interest in solving problem. The learners were motivated to achieve the targets set. The variety of activities kept the learners interest intact. Due to the high level of interest and motivation the class discipline problems were not found. The study of the obtained results indicated that the objective to study CALL class as a case in the present research was to resolve to the surveillance that computer is an efficient mode for enhancing advanced ESL learners’ motivation and interest which ensured positive impact of CALL courseware on learners. Moreover, the study of results showed that learners took assistance of computer and also helped each other by sharing information and knowledge. Peer teaching was an evident factor whereby learners not only shared their knowledge about the course content, but further described their growing expertise at software being used and ease to operate computer in ESL learning.

Conclusion

The findings of the case study lead to the conclusion that CALL offers integration of multiple media to ensure pedagogical benefits for learners. CALL tasks encourage greater interaction between teacher and learner and among peers; and minimize language learning barriers by boosting motivation level of ESL learners. Therefore, computer technology is an efficient mode of ESL pedagogy for promoting positive attitude to learning.

Furthermore, the results of the present study are in consonance with the results of many other studies demonstrating pedagogical benefits of computers in second language learning in general and ESL in particular such as Chapelle & Jamieson (1989); and John & Wheeler (2008). Similarly, the idea, computer is an efficient pedagogue presented by Higgins & Johns (1985), is also supported by the results of the present study. Moreover, it seconds the hypothesis researched by the authors in Pakistan, who identified computers as beneficial pedagogical instrument for different subjects and English (Tabbasum, 2004; Mehmood, 2004; Majeed, n.d; Irshad, 2008; Irshad & Ghani, 2011).
However, the present study is limited as the learners were taught a specially designed courseware by the authors. Moreover, the setting was not in specially networked CALL laboratory but in an ordinary computer lab. However, it is predicted that in future CALL will thrive in Pakistan, as digital media is increasingly used in and outside educational institutions. In this relation, the report published by Ministry of Education (2004) on *The Development of Education* in Pakistan described achievements in computer based capacity building of ESL teachers. In addition, it aims to develop online and CD-Rom based courses for ESL teachers and learners (Ministry of Education, 2004). National Education Policy 1998-2010 also proposes important steps for the induction of CAI at all levels in educational institution to modernize education particularly ESL in Pakistan. This scenario indeed promises the bright future prospects for CALL practice in Pakistan.
References


Appendix A
JMATCH

The Golden Treasure
Matching exercise

<table>
<thead>
<tr>
<th>The drummer’s wife went into the church.</th>
<th>“My golden treasure, my riches, my sunshine!” said the mother; and she kissed the shining locks.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Those upon the canvas and in the glory over the altar were just as beautiful as the carved ones;</td>
<td>but the real sunshine was more beautiful still.</td>
</tr>
<tr>
<td>Thor hair gleamed golden in the sunshine, lovely to behold;</td>
<td>and they were painted and gilt into the bargain.</td>
</tr>
<tr>
<td>It shone redder, clearer through the dark trees, when the sun went down.</td>
<td>the wife of the drummer was very cheerful, and looked and looked, and wished that the child might have a gleam of sunshine given to it.</td>
</tr>
<tr>
<td>When she really had the little child in her arms, and held it up to its father, then it was like one of the angels in the church to behold, with hair like gold the gleam of the setting sun was upon it.</td>
<td>She saw the new altar with the painted pictures and the carved angels.</td>
</tr>
</tbody>
</table>