UNIVERSITY PREPARATORY SCHOOL STUDENTS' AND TEACHERS' PERCEPTIONS OF COMPUTER-ASSISTED LANGUAGE LEARNING ENVIRONMENT

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Approval of the Graduate School of Sciences

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ABSTRACT

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This study aimed at investigating university preparatory school students' and teachers' perceptions of computer-assisted language learning (CALL) environment. The sample consisted of 308 students and 50 teachers from Zonguldak Karaelmas University Preparatory School. Data was gathered from the participants via two Effective CALL Questionnaires (ECALLQ) developed by the researcher.

Both inferential and descriptive statistics were used to analyze the data. Principal component analysis was used to find the dimensions of the student questionnaire. Repeated measures ANOVA and paired-samples t-test were employed to define the priorities of the students within the dimensions of each subscale. MANOVA

was used to investigate whether there were significant differences among students' CALL environment perceptions with respect to certain background variables. Descriptive statistics were used to analyze students' and teachers' perceptions of computer's role and teacher's role in CALL environment and to analyze all participants' responses to the open-ended questions.

The study indicated that students perceive the computer's role with respect to (1) language skills, (2) overall effect of computer and (3) motivation; teacher's role with respect to (1) teacher assistance, (2) teacher guidance and (3) teacher presence; students' expectations from the teacher with respect to (1) laboratory activities guided by the teacher and (2) overall guidance. According to the students' perceptions, language skills, teacher assistance and lab activities guided by the teacher were found to be the most effective dimensions.

Descriptive statistics showed that both students and teachers are undecided about the effectiveness of CALL, and they believe that teachers are effective in CALL environment.

Key words: CALL, ELT, EFL, meaningful learning, interaction.

ÖZ

ÜNİVERSİTE HAZIRLIK OKULU ÖĞRENCİ VE ÖĞRETMENLERİNİN BİLGİSAYAR DESTEKLİ DİL ÖĞRENİMİ ORTAMINA İLİŞKİN GÖRÜŞLERİ

Küçük, Tuğba

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Bu çalışma Zonguldak Karaelmas Üniversitesi Hazırlık Okulu öğrenci ve öğretmenlerinin bilgisayar destekli İngilizce öğrenimi ortamına ilişkin görüşlerini incelemeyi amaçlamıştır. Örneklemi Zonguldak Karaelmas Üniversitesi'nden 308 öğrenci ve 50 okutmandan oluşmaktadır. Veriler biri öğrenciler diğeri okutmanlar için araştırmacı tarafından hazırlanmış iki işlevsel CALL anketi aracılığıyla toplanmıştır.

Verileri analiz etmek için hem çıkarımsal hem de betimsel istatistikler kullanılmıştır. Çıkarımsal istatistik olarak, önce İşlevsel CALL anketinin boyutları belirlenmiş, daha sonra öğrencilerin ankette yeralan her bölümün boyutlarındaki önceliklerini belirlemek için tek yönlü varyans analizi ve t- testi yapılmıştır. Son olarak özgeçmiş değişkenleri bakımından öğrenciler arasında bilgisayar destekli dil öğrenimi konusunda önemli görüş ayrılıkları olup olmadığını bulmak için çok yönlü varyans

analizi yapılmıştır. Betimsel istatistikler öğrenci ve öğretmenlerin bilgisayar destekli dil öğrenimine ve öğretmenin bilgisayar destekli İngilizce öğrenimi ortamındaki rollerine ilişkin görüşlerini kapsayan verileri ve öğrenci ve öğretmenlerin açık uçlu sorulara verdiği cevapları analiz etmek için de kullanılmıştır.

Çalışma hazırlık okulu öğrencilerinin bilgisayarın rolünü (1) dil becerileri, (2) bilgisayarın genel etkisi ve (3) motivasyon; öğretmenin rolünü (1) öğretmen yardımı, (2) öğretmen rehberliği ve (3) öğretmen varlığı; öğrencilerin öğretmenden beklentilerini (1) öğretmen tarafından yönlendirilen laboratuar aktiviteleri ve (2) genel rehberlik olarak değerlendirdiğini ortaya koymuştur. Son olarak öğrenciler dil becerileri, öğretmen yardımı ve öğretmen tarafından yönlendirilen laboratuar aktivitelerinin tüm boyutlar arasında en önemlileri olduğunu düşünmektedirler.

Veri analizi hem öğrenci hem de öğretmenlerin bilgisayar destekli dil öğreniminin işlevi konusunda kararsız olduklarını ve öğretmenin bilgisayar destekli dil öğreniminde işlevsel olduğunu düşündüklerini ortaya çıkarmıştır.

Anahtar kelimeler: Bilgisayar destekli dil öğrenimi, İngilizce dili öğretimi, yabancı dil olarak İngilizce, anlamlı öğrenme, etkileşim.

To the memory of my devoted, beloved father,

Erol Orhan Küçük

&

To my affectionate, guardian angel mother,

Şehnaz Türkan Küçük

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INTRODUCTION

1.1 Background of the study

Facilitating teaching with technology has been an rising concern in most of the research fields for more than half a century. One of the means used with an increasing demand to facilitate teaching with technology today are computers.

So far, many issues related to integrating computer into teaching have been covered by a remarkable amount of researchers. The reason for this is that, we have come to an age when there can be no teaching and learning process without the assistance of computers and the computer has brought significant changes and facilities to almost every aspect of people's lives including language teaching.

Many attempts have also been made to investigate the integration of computer into teaching English as a foreign language by the researchers. That is to say, Computer-Assisted Language Learning (CALL) has started to be investigated together with the common issues in English Language Teaching (ELT).

Computer- assisted language learning which is defined as "the search for and study of applications on the computer in language teaching and learning" (Levy, 1997, p. 1) has developed very rapidly recently and foreign language learning pedagogy has now begun to adopt it in many institutions of various countries including Turkey. Basically presented as a supplement to classroom instruction, now to promote learner

autonomy and facilitate teachers' role and leadership skills computers are being widely used (Fotos & Browne, 2004).

CALL is developing day by day and it is seen as a relatively new field of study tough, since it is a changing field of study. Therefore in most of the studies, multidisciplinary perspectives such as; artificial intelligence, cognitive science, psychology, computer science, curriculum studies and fields of applied linguistics are represented by the researchers to make the readers understand the ideas about CALL easily (Beatty, 2003). In fact, it is wrong to separate CALL from other disciplines, especially from applied linguistics and curriculum studies.

First computers as large mainframes, which were only found at research facilities of university campuses in 1950s, were used to enhance language learning (Beatty, 2003). After that, CALL was formed of three main approaches which were *Structural CALL* dating back to 1970s and 1980s, *Communicative CALL* 1980s and 1990s. Especially in 1990s the personal computer came to front as a significant tool for language teaching (Hanson-Smith, 2001, p. 107). Then, *Integrative CALL* emerged in the 21st century. According to the integrative CALL, interaction was indispensable to provide meaning in the related contexts (Bax, 2003; Fotos & Browne, 2004). With the help of technology developing everyday, new software and more sophisticated computers have reached an access and gained more capabilities (Beatty, 2003; Chapelle, 2001). In other words, those universities particularly in the USA and UK developed computers to promote interaction between the learner and computer in language teaching. Thus, new possibilities to enhance interaction were born with the help of

pictures, slide shows, videos or audio preferences loaded in the computers. However, this interaction was useful for students' learning to a certain extent.

Moreover, those universities emphasized learner autonomy and the authorities thought that with regard to the pacing issue CALL practices would be beneficial for EFL students' learning. However, one of the weaknesses of those practices was that students were not guided about the order of the subjects and activities they were obliged to tackle during CALL application (Higgins & Johns, 1984). As a result, regardless of the commonly accepted view that *"giving learners control of their learning is a good thing"* there has been a polarity among ideas on learner autonomy issue in CALL (Hubbard, 2004, p. 48). For instance, Boling and Soo (1999, cited in Fotos & Browne, 2004, p.48) referred to many studies indicating that a high degree of learner control does not always facilitate effective learning. Moreover, they argue that novice learners can learn more comfortably if "high teacher control" is involved in the process. Pennington (1996) also stated that software can sometimes be deceiving for the novice learners when they try to reach information.

Additionally, Brown (1997, p. 245) warns that "improved tools are still projecting an unimproved and thoroughly unrevolutionary agenda" and what is seen as improvement in fact can lead to regression if not used properly. Therefore, it should be assumed as normal if any problem occurs when a student is left on her/his own in front of the computer. That is to say, it should not be forgotten that even in the promotion of learner autonomy the teacher is the crucial component. In terms of language pedagogy, learners are generally not provided with a language learning syllabus defining the language tasks to be accomplished in CALL classes. At this point how teachers can

expose their students to the CALL environment should be investigated (Taylor & Gitsaki, 2000, cited in Fotos & Browne, 2004, p. 131). That is to say, the role of teacher in CALL must be questioned to foster an enhanced learning environment. As the perceptions play an important role in this research field both students' and teachers' perceptions are invaluable for this study to fulfill its purpose.

Furthermore, McArthur (1983, cited in Beatty, 2003, p. 22) states that in the past another problem was how to make simulated situations resemble real life situations. Then, this problem turned out to be recognized as how teacher-learner cooperation can evade replication (or simulation) and how this cooperation can create authentic and appropriate language of its own. Authenticity is a crucial point because authenticity brings meaning together. Findings from Warschauer and Kern's (2000) study proved that implementing strong purpose activities which are authentic during computer-assisted instruction provoked students' interest and engaged them by improving their language skills. Consequently, "purposeful learning" which we can call at the same time meaningful learning has come forth in CALL practices. From this point of view, the very emergent role attributed to the language teacher during CALL applications must be investigated clearly.

As Levy (2002) argued, specific limitations and weaknesses when implementing CALL technology have always existed. These limitations were investigated thoroughly for the sake of a fruitful computer-assisted context. To Levy (2002), the crucial problem is not deciding on whether to use technology or not. Instead, one must carefully weigh a number of technological, pedagogical and learner factors in this field of study in order that the strengths and limitations can be enlightened. Until now, much has been done in

the technology perspective and learner factors, yet effective measures have not been taken regarding the pedagogical aspect. Abdi Kazeroni (2006) emphasizes that the pedagogical issue should be examined in a deeper sense as well and he suggests "a change which can help conceptualize teachers' needs in designing computer-assisted tasks in accordance with the characteristics of effective CALL programming as clarified in research on second language acquisition"(p. 9)**.**

Taking all these into account it can be assumed that the perceptions of students and teachers may provide valuable information about the strengths and weaknesses of CALL and necessary improvement can be provided. Moreover, by examining the teacher's role greater insights to promote CALL practices can be obtained.

1.2 Purpose of the study

The purpose of this study is to investigate university EFL preparatory school students' and teachers' perceptions of computer's role and teacher's role in CALL environment.

1.3 Significance of the study

Today, most of the researchers and educators think that computer education should not be ignored in teaching English. Even many seminars and conferences are being held each year on computer-assisted language learning with the contribution of the English Teachers Association in Turkey (INGED) and the Teaching English to the Speakers of Other Languages (TESOL), which are reputable organizations in English language teaching. CALL is important in the sense that while it provokes students to be computer literate, it also gives students the chance to build on their own learning. What is more, a rich amount of resources and many activities for each skill in language

learning involved in the computer are great advantages for students' learning. Moreover, computers also serve as a teaching tool for the teachers. With the help of the computer, teachers can improve their teaching skills and teach in creative ways.

This study is designed to examine the university preparatory school students' and teachers' perceptions of the effectiveness of CALL. Other researchers have already dealt with this issue. However, computer's and computer software's continuously evolving nature necessitated a reexamination of the effectiveness of CALL in EFL context in Turkey.

This study will also emhasize some basic assumptions related to English language teaching (ELT) such as interaction, authenticity and meaningful learning with respect to CALL. Students' and teachers' perceptions will give a clearer picture for the effectiveness of CALL on these issues. Moreover, it is necessary that teachers and administrators should be aware of what characteristics of CALL students give priority to. Therefore, the findings of this study will help program developers act accordingly and the administrators and teachers may intervene in the process to meet students' needs where necessary. In other words, the students' and teachers' perceptions will help figure out how CALL can be effective in language learning.

Additionally, there is a need for research that investigates students' and teachers' perceptions of teacher's role in CALL. The teacher has an indispensable role in computer laboratories even if s/he is not directly into the process. It is supposed to be the teacher who fosters interaction among learners via CALL. Therefore, teachers need to know how they can contribute to an effective CALL environment and which teacher qualities students give importance to. In addition, teachers can refurbish their opinions

accordingly. The results of this study may help teachers to get enlightened on teacher behaviors in CALL. As a result, teachers can improve their skills in teaching with CALL and this study can be an input for teacher education .

Furthermore, this study may provide a documentation for educators, teachers and administrators as it will provide a better understanding of the term “effective computer-assisted language learning” from the students’ and teachers’ perspectives. CALL is becoming important in EFL classes.Without knowing the insights of the students and teachers, just providing access to computers is not enough to ensure the integration of CALL into an educational setting. With the help of reviews in this study, the perceptions of CALL and the teacher’s role will be revealed and in this way, the interest and concern for qualifications of effective CALL may be promoted.

This study will also provide documentation for curriculum developers as they may benefit from it in developing a sound curriculum for any preparatory school program in higher education level. Most university preparatory schools are now interested in adapting CALL into their curriculum. If it is observed that CALL is effective, some institutions that have not done so yet might decide to adopt it. On the other hand, if the opposite is observed they might not integrate CALL into their existing curriculum. Therefore, this study may offer them insights into the weakness and strengths of CALL. Moreover, curriculum developers developing ELT undergraduate programs and administrators of preparatory schools might also place more stock in-pre and –in-service training of teachers in CALL. Pre-service teachers might be given a course on how to design a course with computers for EFL students. In-service teachers might be encouraged to create their own computer-assisted courses.

At the local level, this study aims to learn the perceptions of the students and teachers towards the current CALL curriculum in Zonguldak Karaelmas University Preparatory School. The institution will benefit from the study since the strengths and the weaknesses of the existing CALL curriculum will be identified in the process. The study will also offer a deeper understanding of the circumstances under which CALL is being implemented. In a way, this will offer suggestions to improve the learning environment. The observed weaknesses may also lead to changes in the curriculum, and the strengths may serve as an example to other institutions. This study may also lead to further studies on CALL.

1.4 Limitations

There are some limitations of this study. To start with, this study relied on the teachers' and students' self-reported data. It is more preferable to support participants' self-reported data with a variety of measurement tools such as direct observations and interviews.

Moreover, the study is limited to Zonguldak Karaelmas University in Turkey. The items in the Effective Computer-Assisted Language Learning Questionnaire were limited to the dimensions selected by the researcher herself.

1.5 Definition of the terms

CALL: Computer-assisted language learning. Chapelle (2001) reported that early practitioners who gathered at the 1983 Teachers of English to Speakers of Other Languages (TESOL) conference agreed on the term CALL for using computers in language learning.

Learner autonomy: According to Holec (1981), learner autonomy is the "ability to take charge of one's own learning" (p. 3).

Authenticity: Authenticity is the extent to which language tasks pertain to real life language use (Brown & Hudson, 2002).

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

An amount of research has been carried out about the position of computers in the learning and teaching context, and so far computer use has reached to a limited amount of people, but it will have access to many more amounts of widespread audiences in the future bringing together many other researches to the literature (Beatty, 2003; Chapelle, 2001; Donaldson & Haggstrom, 2006; Fotos & Browne, 2004; Hubbard, 1996; Kenning & Kenning, 1983; Levy, 1997).

Huh and Hu (2005) claim that it is a weakness that effective theoretical support associated with second language acquisition is not included in the studies and some studies emphasize only the quality of the tool (in this case computer) used in the study rather than the process going on through with the contribution of the tool. In addition according to Egbert (2003), there is lack of research regarding other questions, methods and perspectives to be done in CALL field which are rather related to theories than inclined to testing technologies in CALL. This chapter presents a review of the literature on the position of computers, its implementation in curriculum and its integration with a meaningful environment in language learning and teaching regarding mostly the indispensable role of teacher. Particularly, this part focuses on teachers' roles and perceptions of both teachers' and students' on the role of teachers in CALL practice.

2.2 Value of CALL

Generally speaking, there are arguments on the value of computer one of which is about computers' taking the role of human teacher in every aspect, except keeping an eye on the process of the students, which is rather an unacceptable and unimaginable argument. The other argument is computers' taking the role of human teacher in the process of doing repetitive work such as; drill and practice so by this way the teacher can concentrate on more creative aspects of her/his job. At this point, teachers are attracted by computers (Higgins and Johns, 1984).

On the other hand, computer can also be seen as an assistant for teachers. In this sense it can be operated by the teachers, and the students can be guided to operate on the keyboard as if they are writing or drawing on the blackboard (Higgins and Johns, 1984). Moreover, a sense of excitement and involvement in the class can be created by the help of computer. However, sometimes even a computer can be seen as an enemy in a context where the student plays a game on it while the teacher is in the role of an ally with the student against computer (Higgins & Johns, 1984).

Krashen's (1982) theory gives another idea about computer's value by claiming that computer is effective in only conscious process of learning and is ineffective in facilitating acquisition. In accordance with this idea, some CALL-versus-classroom studies were carried out to find out whether "CALL plus classroom" is better in quality than the classroom instruction alone. In these research studies, the independent variable is the type of instruction delivered to students by the computer and teacher or by the teacher alone. A group of these studies have discovered that students in CALL group outperformed the teacher only-group with a little difference (e.g., Buckley & Rauch,

1979; Freed, 1971; Oates, 1981; Reid, 1986; Van Compen, 1981). Similarly, Meich, Nave and Mosteller (1996) examined 22 empirical CALL studies performed between 1989 and 1994 and the researchers came to a conclusion about computer's effect in appreciably improving students' achievement (p. 1). Yet, in other studies researchers (e.g., Brebner, Johnson and Mydlarski, 1984; Kleinmann, 1987; Lysiak, Wallace and Evans, 1976; Murphy and Appel, 1977) have found no prominent differences between the groups (Beatty, 2003; Chapelle & Jamieson, 1991, cited in Dunkel, 1991, p. 40).What is more, some researchers (Smith & Sherwood, 1976) value CALL since they believe it promotes learner autonomy. However, the literature is still dissatisfying in terms of revealing out the truth about the benefits of students' controlling themselves in CALL. On the other hand, one of the typical and critical shortcomings of CALL as argued by critics is that students' learning is not controlled by themselves, rather the program has the control over them (Higgins & Johns, 1984; Underwood, 1984).

To sum up, most of the time in CALL studies technology is praised and seen as a means which is to serve much better outcomes of students' learning than being without the technology. According to Huh and Hu (2005) there is lack of negative study results and researchers make effort on presenting only the positive aspects of computer technology, which may result in reaching improper findings (p. 14). Consequently, the negative results should be seen as advantages for doing a sound research in the field and the value of CALL should be carefully examined as being free from bias.

2.3 Computer's role

Levy (1997) stated that the role of computers was conceptualized into two main titles: the directive (manager of tasks, expert system, surrogate teacher, etc.) and non-

directive (tool, complement to class, database and language practice) roles of the computer. Additionally, Higgins and Johns (1984) put forward the idea that we should approach CALL programs- also computers themselves- as resources, like books in a library, rather than essentials of the curriculum. They emphasized its complementary nature in a way like Levy (1997), and they further stated that:

> Like books, they can be worked through intensively or dipped into occasionally; used to introduce a topic or to follow it up; prescribed centrally or selected individually; approached with a serious learning purpose or indulged in for recreation with any learning being incidental to fun (p. 86).

What is more, according to Pennington (1991, cited in Dunkel, 1991, p. 134) the computers' capacity to represent and process different types of linguistic information determines their role in language training and research. Jones and Fortescue (1987) also mentioned that computer's capacity to involve many skills for the activities in itself is a great advantage for the learners but which part of language skills are to be given more emphasis is again to be decided by the teacher. As figured out, the computer is not a decision mechanism in any way but it is an informant storing large amounts of information, which is also named as "workhorse". Students can access any information on it about vocabulary or grammar. In addition, computer is also a stimulus for providing learners with subjects to talk about in discussion, simulation or role-play but it is not in the role of a guide through the challenging and widespread process of language learning.

In other words, CALL is deficient in some aspects. These deficiencies indicate that success of CALL depends on some other factors as well, and these factors will be touched upon in the next section of this thesis.

2.4 Factors affecting the success of CALL

As it is mentioned in the previous section there are some factors affecting the success of CALL. The first one is the "teacher factor" which affects CALL practice in various ways.

First of all, human competence for innovation (i.e., the capacity to implement computer-assisted information processing in novel ways) leads to further developments in the use of computer technology for language instruction and research (Pennington, 1991, cited in Dunkel, 1991, p. 134). Thus, it can be inferred that teacher has a vital role in shaping the position of computers when language instruction is concerned.

Secondly, Clark and Salomon (1986) focused on the cognitive aspects of CAI (Computer-Assisted Instruction) and claimed that learning is not the outcome of computer itself which means there aren't any effects of computer on learning when a student is left alone in front of it. Moreover, they believed that interpersonal second language use and interaction patterns are determined by other factors which implicate the teacher factor not the computer itself.

Thirdly, an unattainable role for computer to take on is deciding what should be tolerated and what should be verified during learning (Beatty, 2003). That is to say, the computer cannot serve for individual needs and cannot be discriminating in making corrections which emphasize the teacher factor once more.

The second factor affecting CALL is "method of instruction". Clark (1983) in his survey about media's influence on learning states that it has been the type of media used which may have an impact on the achievement, yet he further adds that the medium, which is the computer in this context, itself in making instruction is not as significant as

the method of instruction. Moreover, Clark further asserts that with effective instructional methods used in any medium, unambiguous formation of the tasks to be learned can be enhanced, stages required to complete the task can be minimized, and self-pacing on assignments can be improved (Dunkel, 1991).

In addition, it was revealed in John Hopkins University survey (Becker, 1983, cited in Dunkel, 1991) on microcomputers' uses in school that the social organization of learning rather than computers is what increases student achievement.

> Using computers well is not merely a matter of finding good software, but of designing a social and instructional system that maximizes the benefits that computers might bring to different types of students facing different educational challenges (p. 3).

These findings imply that the organization of the CALL class can be designed as to create a social environment for learning. According to Jones and Furtescoe (1987) arranging small groups of learners working together under the supervision of teacher can create rich environments in terms of discussion and cooperation among learners, and these attempts for oral communication can be benefited productively in a well planned lesson. Jones and Furtesco (1987) also emphasizes that in such environments where there is group work engaging students, the burden is always the learners' slipping back into their own language during the oral communication. However, this is not an exceptional problem to CALL. In such situations, ways of encouraging the use of target language can be adapted by teachers with their very own strategies to cope with this problem. Regarding these thoughts, the computer can be seen as a flexible language learning aid.

Egbert (2005) gives another scheme about CALL with which some variables are highlighted as being a part of the process. These are learners (with their thoughts, behaviors, motivations, experiences and understanding), language (including its status and structure), context (physical and temporal environment and the social, economic, cultural, and linguistic influences), one or more tools (and the affordances the tool provides), tasks and activities (content, structure and organization), peers and teachers. That is to say, all of these components are found in CALL process and they affect learner achievement. Therefore, they should be addressed in CALL researches. To sum up, it can be inferred that social and cooperative use of computers provided and enhanced by teachers can be highly practical for the learning.

2.5 Metaphors used for computers

There is a core metaphorical description by Dede (1995) about computers in which he states “computers generate learning the way a fire generates warmth”. With this sentence Dede puts an emphasis on how uncontrollable computer can be where how to use it effectively is not known. There are also some other metaphors-other titles for the role of computers- which shape CALL research field as Meskill (2005, cited in Egbert and Petrie, 2005, pg.28) mentioned.

To begin with, the computer is often seen as a “tool”. This metaphor resembled a slave to learning rather than a delivery device (Meskill, 2005, cited in Egbert and Petrie, 2005). According to Meskill this tool can affect our thinking, behaving and the way we communicate, yet it should be guided by carefully framed uses of it.

Two other metaphors for computer are the “conduit and berry-bush metaphors”. Conduit metaphor can also be called a tool again but a “delivery tool” this time. As

Meskill (2005) stated it represents the phenomenon of transferring knowledge to the still brains of students and then testing whether the knowledge has been successfully delivered into their brains. It is computer-controlled. On the other hand, berry-bush metaphor symbolizes the "content" and it is learner-controlled (cited in Egbert and Petrie, 2005, p.28). For instance, in an empirical study (Stevens, 1984) by controlling the stages within the content (berry-bush), students learned more of the target language.

Other metaphors attached by John Higgins (1988) to computers are "magister and pedagogue metaphors" used for language learning and teaching in 1984. Like the above mentioned two metaphors, there are distinctive differences between these metaphors as regards the instruction. While the computer as a "magister" has total control over instruction, the other metaphor "pedagogue" is perceived as a slave with a single task of only serving the learner.

There are two more metaphors reflecting computers' use in the class, one of which is "micro world" as named by Seymour Papert (1980). With this metaphor "a thinking tool" concept was attached to the computer, by which learners gained the whole control of their world of navigating, creating and manipulating simulated situations. Computer was seen as an object to think with in this *experiential learning* environment. The other metaphor was computer as a "theater" which is in fact the subtitle of micro world metaphor issue. By the help of this metaphor's deceptive but willing adjournment of the incredulity, students can readily be adapted to the computer. Laurel (1991) approaches this metaphor in sociological and psychological aspects. According to him computers are like the center stage, and learners participate in activities by taking on different roles, following scripts, they get cued, rehearse and perform their roles.

In conclusion, all these metaphors have implications for designing research to fully investigate the views of teaching and learning in computer-assisted language learning contexts. However, of all these metaphors “micro world” and “theater” metaphors contributed much to design an innovative instructional setting for language learning. Yet, the important thing about learning in CALL environment is to take into account the context not only the computer and the student throughout learning. What is meant by context is especially the entire teaching and learning dynamics namely techniques, plot, characters and so on all of which affect the learning as a whole.

2.6 Control mechanism: Learner or the computer?

Some hints about who owns the control, learner or the computer, in CALL practice were given in the previous section. This issue is worth dealing with; therefore it will be explored in depth in this section.

To start with, it is understandable that the opportunity of students’ control over their own learning during CALL is beneficial to them (Robinson, 1989). Conversely, some critics argue that students are being controlled by the computer program while the opposite is expected (Higgins & Johns, 1984; Underwood, 1984). The reason for this is that it has been observed that students give up investigation too soon, and they just push the help button whenever they are stuck in difficult situations. As a result, one cannot call this learning because it is not realized in a cognitive way (Howe & Duboulay, 1979). On the other hand, according to Cobb and Stevens’s findings (1996) students did not use help options though the experts think the students knew these help options would be for their benefit to improve their learning (Chapelle, Jamieson & Park, 1996). Consequently, it can be inferred that the problem of who controls whom in CALL environment has not

been resolved yet neither too much freedom nor too much extrinsic control over students can provide a fulfilling solution to enhance a fruitful CALL environment.

2.7 Meaningful teaching and learning issue with computers: Project time framework

Firstly, there is a common term used within a broader framework, which is "Meaningful Learning Using Technology (MLT)". For understanding this issue thoroughly and in an organizational way and to give a clear description of what is meant by MLT, a project called "Project TIME" was conducted. The team members in this project made use of the core five research-based attributes of meaningful learning explained in the work of Jonassen, Peck, and Wilson (1999) and figured out MLT attributes framework. According to this framework, meaningful learning with technology can be facilitated by six attributes. To Jonassen, Peck and Wilson (1999), these attributes are detached, and the way teachers use technology is supposed to be consistent with them. These six attributes are as follows:

For *intentionality*, meaningful learning is expected to be intentional. In other words, clearly set objectives and goals. Both teachers and students are to be guided by these objectives and goals. In addition, teachers decide on the standards-based learning outcomes to be achieved throughout the curriculum units to be covered and they encourage students to go beyond these outcomes by organizing learning tasks. At this point, teachers play a significant role.

As *content centrality* is concerned, it is very essential that content has a relevance to the students' life but it is also a milestone for the sense of teaching. That is to say, it must be in accordance with the curriculum standards. Additionally, to Wiske

(1998), teachers must have a deep and flexible understanding of the subject matter to design meaningful learning. By this way, the students can be led in a variety of ways and they do not have to take the route previously organized by the text. The implication of this attribute for teachers is that teachers should be well prepared and flexible in account for the given content so that they can manage their instruction by structuring "big ideas" and significant questions. Bransford, Brown and Cocking (2000, p. 36) state that according to experts what students learn is, within a structural way, arranged via "big ideas" which can also be named as core concepts. In other words, teachers' expertise in big ideas makes complex become simpler for students.

The third attribute *authentic work* is another required aspect when meaning in technology is supposed to be provided. Ashburn (2006) clarifies that authentic work can be accomplished when teachers recognize the importance of engaging students' very own experiences to the content. Besides, teachers need to be skilled in choosing authentic materials and activity which do not contradict with learning goals which are to be met in the curriculum standards. Therefore, students' expectations and needs must be integrated to the course content also in CALL environment.

The fourth attribute *active inquiry* supports the idea of authenticity. According to McTighe, Seif, and Wiggins (2004) "Students can only find and make meaning when they are asked to inquire, think at high level, and solve problems"(p. 27). Therefore, teachers are required to develop a captivating atmosphere in the classroom by relating real world content and relating an inquiring ambiance to the units and learning objectives. Furthermore, it is a good idea for teachers to use students' own questions as

an instructional strategy so that students feel confident and they get involved in the learning tasks efficiently.

The *mental model construction* attribute related to teachers' bearing in mind that gap enlightened by students' network can result in facilities to manipulate different mental models so that learning becomes meaningful (e.g., Zull, 2004). Shulman (1987, cited in Wiske, 2006) clarifies this issue by saying that when a teacher transmits her/his own understanding to the students effectively, this shows that s/he has done more than only transmitting the knowledge of the subject matter. Having an ample of knowledge about students' prior knowledge, their misconceptions and interests is the basis for understanding them and make them construct their own understanding.

Additionally, the logic behind the last attribute which is *collaborative work* is to "create a synergistic learning experience where the sum is greater than any of its parts" (Schniedewind & Davidson, 2000). However, it is a great challenge to teach and learn in a collaborative technological environment. Therefore, research studies on teaching strategies to reach the desired goals with grouped students should be conducted.

In this part, six attributes mentioned have aimed at giving an illustrative definition of meaningful learning using technology. All in all, to attain meaningful learning, CALL teachers must know how to organize meaningful learning environments enriched with learning tasks which are making sense also where technology is used.

2.8 Teaching for understanding framework

A research having parallel outcomes with Project TIME was carried out with some school teachers to reveal the steps of effective *teaching for understanding* (TFU) with the new technologies by researchers at Harvard Graduate School of Education.

Understanding was not just defined as a mental product but also as a performance capacity (Wiske, 1998). Accordingly, four core questions were enlightened within a framework which was developed through a multilayer collaborative action research project:

1. What topics are worth teaching for understanding?

2. What do teachers want students to understand?

3. How can teachers help students to develop and demonstrate understanding?

4. How do teachers use assessment to promote and document understanding? (Wiske, 1998)

For the first question, the answer was to "organize curriculum around generative topics" which are related to the students' interests, teachers' passions and the common issues in the world.

Secondly, teachers must set "understanding goals" by which students' can apply and extend their knowledge for long term goals.

Thirdly, it was reported that teachers can help students develop and demonstrate understanding by engaging them in a rich setting of "performances of understanding" which means teachers design learning tasks related to the students already gained knowledge. In this way, students will be able to overcome the task using the newly conveyed knowledge through guided inquiry.

Lastly, teachers are expected to make "ongoing assessment" of students' responses given the public criteria and give feedback to foster their efforts. Moreover, teachers should lead students to use certain criteria to make self and peer to peer

assessment. To sum up, it is implied that technology does not teach; it is teachers who teach.

2.9 The roles of teachers in CALL environment

Some researchers have emphasized the importance of teacher presence in the laboratories with their comments. What is more, some research studies indicated the crucial roles of teachers in CALL environment.

To start with, integrating computers into language classes is a curriculum change, and attempts taken for this change require the involvement of teachers in all phases (preparation, organizing, resourcing, promoting and implementation), so who is to implement this change in this context is quite apparent: teachers as being the part of the process. Therefore, their inquiries and reflections should be taken into consideration to evade from any failure throughout the implementation of the new innovations (Chapelle, 2003; Egbert, 2005). As Crook (1994) stated,

> If we do wish to conduct evaluations of what is learned in computer-based contexts, we must go beyond the input-output designs that characterize much research in the area… Computers are unlikely to function as magic bullets-effortlessly releasing their therapeutic effects at points identified by the teachers. The unfamiliarity and wizardry that surrounds them may cultivate such notions, but the real impact of learning through this technology may need to be measured with attention to how it is assimilated into the surrounding frame of educational activity (p. 9).

Secondly, Robinson (1989) compared a student being for the first time in CALL laboratory in charge of his own learning to a student pilot flying without being given any guidance. According to him, both feel out of control, therefore he stated that such uncontrolled and unguided student behavior should be avoided until the students have gained some language competencies. Similarly, Meskill, Mossop and Bates (1999) claim

that a person modeling the behavior or task and observing the students' learning process can be helpful for them to develop internal control. Additionally; Horwitz, Horwitz and Cope (1991) stated that particularly in a second language learning environment students need much more guidance and to provide guidance is absolutely the teacher's responsibility.

Thirdly, a study was conducted by Robinson, Underwood, Rivers, Hernandez, Rudesill and Ensenat (1985) with high school students studying first-year Spanish in a 2-week field study. The study was undertaken away from the possible teacher influence, and the result was that despite the students' initial desire to be away from the teachers, they wanted to turn back to their classrooms at the end of the study. The reason for this is that everything in the laboratories was very mechanical and impersonal for them. The same thing was observed in a study at the United States Air Force Academy among college students by Verano (1987). In another study conducted by Lasagabaster and Sierra (2003) with 59 university students most of whom were females, only 22% of the students stated they had fun with grammar learning on the computer because most of them found it monotonous and the rest stated that "In general it (CALL) is more boring than the class." Moreover, the participants thought that there was no actual improvement in their speaking (82%) and reading (77.7%) skills. All in all, most of the students (76.3%) preferred teacher-software combination in the laboratory and 22% of the samples some 13% of whom hated computer learning chose to have only teacher option. It is apparent that these students see CALL as a complementary to teachers' instruction. Furthermore, it is clear that in their tedious and pointless moments only teacher guidance

and creativity can establish a facilitating environment for students studying in CALL environment as well as in classes without computers.

Additionally, when students are left on their own, it is a hard task for them to decide on what programs to study because there are too many materials in front of them. In Lasagabaster and Sierra's (2003) study, 76% of students responded that it is better if teachers choose the program to be studied. Another issue is selecting which subjects to study in the program. Surely, a well-trained teacher rather than a computer can decide on this easily (Beatty, 2003, p. 82).

Furthermore, Beatty (2003), based on his observations, argued that the students must be guided towards collaboration. The form of collaboration is in fact "group work". As the basic human desire for social contact has always existed and exploring and working together has always drawn the attention of learners, this idea can work well as a teaching strategy in computer-assisted classes. Similarly, Pellettieri (2000) stated that social dimensions are essential on the aspect that they provide motivational purposes and enhance production and correspondence of meaning. As a result, with group work in CALL environment, students might be encouraged to involve in genuine communication, which is authentic and match students' expectations. Derycke, Smith and Hemery (1995) also put emphasis on collaborative learning and stated that:

> Some of the highest pedagogical objectives can only be achieved by employing group learning activities such as group problem-solving, games, case studies and exchanges with real experts. In all of these activities and skills, language is explored, exercised and developed in ways supported by collaboration at computer (p. 182).

What is more, in an empirical study carried out by Stracke-Elbina (1998) it was observed that though most of the students were satisfied with the facilities provided by

the program, for instance the combination of four skills was favorable, students chose to integrate computer work into group classes because they wanted to get instant responses and give real answers facing one another. Thus, it is obvious that teacher assistance is needed. The reason for this is that only teachers are able to form collaborative structures within the computer laboratories, and this type of work is called *scaffolded group learning***.** At this point, it is asserted that teachers can establish such structures by:

1. Assigning students to mixed-ability teams.
2. Establishing positive interdependence.
3. Teaching cooperative social skills.
4. Insuring individual accountability.
5. Helping groups process information (Hamm, 1992, cited in Beatty, 2003, p. 106).

Next, in Lasagabaster and Sierra's study (2003) lack of interaction and authentic communication were shown as important burdens for student learning. In this study, one student stated that "You may feel as a fool talking to a machine" (p. 301). Another issue related with social aspects desired in CALL was enlightened in Sengupta's (2001, cited in Huh & Hu, 2005, p.14) study done with a social-constructivist theoretical approach. The results of this study have shown that lack of gestures and facial expressions during computer-assisted instruction is a barrier to the attempts of students' learning. In this case, teacher factor should be taken into consideration for enhancing student motivation and their responses to the instruction.

Additionally, Scholfield and Ypsiladis (1994) interviewed 48 English learning Greek students in their study. This study pointed out that one of the most eminent problems students encounter during CALL application is that feedback provided by the

computer is insufficient for the students' understanding. The central grounds for this claim are as follows: "The programs do not spot answers that are probably just the misspellings of the right answer, or semantically contextual clues and so on" (p.69). In the same way, in Lasagabaster and Sierra's (2003) study the students complained about the ineffectiveness of their mistakes' being corrected by the computer since it did not provide any instructive explanation. Thus, it seems that teachers are better in giving feedback and correcting students' mistakes.

All in all, computer programs will continue to embody pedagogical limitations. However, teacher assistance and guidance can eliminate student frustration reported in the above mentioned situations.

2.10 Learner autonomy versus teacher in CALL

According to Dickinson (1992) "Autonomy is the degree to which learners take responsibility of their own learning" (p.330). Little (1991) further states that autonomous learners are aware of what they have to learn. They are expected to implement effective learning strategies, pursue their own learning process and make changes if required and determine their own way of learning in the end.

When CALL environments are concerned it is seen that CALL presents opportunities for learner autonomy. However, it is not easy for the students to become automatically autonomous and they need teacher assistance and guidance. Several researchers have pointed out this fact. For instance, according to McCarthy (2000):

> For learners to be autonomous first they should be provided with "explicit instruction"; second the learners must be set free to pursue their own ideas in the class and lastly they should be presented opportunities outside the classroom. The most commonly used explicit instruction is providing the learner with authentic materials, and what is crucial at this point is that the teacher has to set a

> framework for the student to complete a particular task. Learners should realize their own efforts and experiences after all, and this does not take place naturally.

Similarly, Little (1991) argues that students must follow some routes to take the responsibility of their own learning and at this stage there has to be a teacher to show them the way (p. 5). Therefore, it is understood that it is not learning without teacher which is desired for independent learning.

On the other hand, Lee (1998) stresses that being able to make choices for themselves shows that students can work at their own pace. However, according to Wenden (1998, p. 33) and Holec (1998) to encourage "greater self-direction" under the guidance of teacher assistance, "an environment where practices offer an advantageous context for attitude change", is needed.

Next, Social Development Theory of Vygotsky (1978, cited in Beatty, 2003, p. 95) supports that a student can develop more skills with teacher assistance or peer collaboration rather than studying on his own. Moreover, according to Vygotskian view learners become aware of their own learning experience when they express it by writing or speaking (Fenner & Newby, 2000) and writing and speaking activities require social interaction together with thinking skills that must be guided by the teacher.

Additionally, Hubbard (2004) draws attention to the conflict between students' previous perceptions on computer use and its new functions. Some computer-based instructions such as chat activity used for language learning can make it difficult for the students to adjust to the new use of it. When there is a lack of communication between target and native language, these problems might be observed (DiMatteo, 1990). Therefore, the teacher's allocating essential time to teach students how to take their own

responsibility is a prerequisite (Niess, 2001). All in all, as Lee (1998) suggests teachers must consider how they can offer manageable and facilitative environments to empower and awake necessary capacity and willingness of students, so that students can take charge of their own learning, which in other words suggests that they will learn how to learn.

2.11 Training CALL teachers

Student achievement is greatly affected by teacher quality and teachers' abilities sustaining the significance of pedagogical view as the dominant matter while making use of the new technologies (Darling-Hammond, 2000; Pratt, Lai & Munro, 2001). Therefore, teacher training is an initial point of bringing theory and practice together in CALL (Bancheri, 2000).

Several research studies have emphasized the importance of training CALL teachers. For instance, Fawcett and Juliana (2002, cited in Rogers, 2002, p.71) state that teachers are not capable of "teaching as they were taught" because the new age surrounded with a growing fields of technology is very demanding for them so they need support. Secondly, in a survey conducted in 2000 by the National Center for Education Statistics it was reported that only one teacher in ten felt really equipped to carry out an effective use of technology in his/her class (Teachers Use of Computers and the Internet in Public Schools, 2000, cited in Rogers, 2002). Additionally, Cremascoli (1998, cited in Bancheri, 2006) said that:

> Teachers are still stuck to transmitting the knowledge to the students with conventional ways rather than being able to guide students in more complex situations brought by technology. Additionally, if teachers are not at ease with the new change in the curriculum, they cannot respond to the expectations attached to them by their new role (p. 32).

Training can be given to the CALL teachers in the following ways:

1. Pre-service technology and computer training should be given to undergraduate and graduate students.
2. In-service teacher education programs can be provided so that teacher discontent and annoyance due to lack of modeling of task design can be prevented. Salmon (2003) states that:

> Any significant initiative aimed at changing teaching methods or the introduction of technology into teaching and learning should include effective moderator support and training, otherwise its outcomes are likely to be meager and unsuccessful (p. 80).

3. The administrators can get the teachers to work with their colleagues to create unit plans integrated with technology use so that teachers will have an ample of time to negotiate ideas with their colleagues about their success and struggles in integrating technology into teaching. The reason for this is that teachers occupied with their colleagues' teaching experiences as mentioned above have been discovered to be more constructivists in beliefs, practice and computer use compared to other teachers (Beatty, 2003; Riel & Becker, 2000).
4. Teachers' capability for creating innovative tasks with computers must be challenged.

2.12 Studies on CALL

Several studies have been conducted on CALL. Among these some focused on students' and teachers' perceptions of CALL.

To start with, Akbulut (2008) studied students' attitudes towards studying on the computer. He conducted this research with 155 freshman foreign language students from

Anadolu University. He made use of a survey prepared by Warschauer (1996). The findings indicated that factors such as computer's sustaining independence, learning, collaboration, instrumental benefits, empowerment, comfort and communication affected students positively. However, it was found that gender and age did not have an effect on computer attitudes.

In her study, Önsoy (2004) looked at the attitudes of students and teachers towards the use of computer-assisted language learning. For this purpose, she administered two questionnaires: one for the teachers and one for the students. 24 teachers and 190 students from Celal Bayar University Preparatory School participated in this study. The student questionnaire was given to two classes from each of the four levels (A, B, C and D). According to the results, B level students were found to have more positive attitude towards the use of computer in language instruction than D level students. Moreover the results showed that while 73% of the advanced level students considered that their teacher gave them effective guidance in a computer laboratory, 71% of the beginners found the guidance of their teacher to be ineffective. Additionally, interviews were conducted with four teachers. The teachers' questionnaire indicated that 64% of the teachers need training to guide the students during CALL practices, and this deficiency affects teachers' teaching. Moreover, 55% of the teachers stated that the need for training in preparing their lesson in accordance with the computer facility also has an impact on their teaching. Similarly, the interview results concluded that teachers need training in using computers for language instruction and there should be a curriculum designed for CALL. Lastly, both students' and teachers' attitudes towards CALL were found to be positive.

Thirdly, Aykaç (2005) focused on speaking in her study and explored students' and teachers' attitudes towards the use of computer mediated instruction used for improving speaking skills (CMC voice and text chat). In order to collect data, two questionnaires were administered in this study; one of which was for the students and the other was for the teachers. The student sample consisted of 20 students in EFL classes in Tourism department of Muğla University. The first teacher sample consisted of 60 EFL (English as a Foreign Language) teachers from Muğla University, and 12 international teachers (Web head people) experienced in Efl instruction using computer-mediated communication formed the second teacher sample. The researcher had thought that it would be useful to learn the insights of chat- experienced teachers to help Muğla University teachers during their implementations. For the student questionnaire part it was found that most of the students found communications technologies for language learning beneficial, however they never or rarely used computer for studying English. Moreover, the chat facilities students used proved to be of no importance in language learning and were found not to be instructional. It was concluded that students should be trained on how to benefit from these electronic resources. As for the teachers' questionnaire, it was found that both Muğla University teachers and chat-experienced teachers highlighted some potential and real disadvantages of CMC voice-chat while both groups think that it promotes learning. As a result the researcher came up with the conclusion that both students and teachers need to be trained in how to use and apply CMC capacities. Additionally, students must be notified about the benefits of using voice/chat text in language learning. Lastly, both students and teachers should be

enlightened and to do so the administration should provide some expert or trainer assistance.

In another study, Dokur (2008) evaluated a program called Wordbird integrated into the curriculum of İstek Foundation Private Gönen School. Out of 300 students 100 students participated in this research study. The students' ages ranged from 8 to 14. A Likert scale questionnaire consisting of 33 questions was administered. According to the study, students had positive perceptions of using this program in learning English in general. To be more precise, when the students were asked whether the software helped them improve their English, 76% of the students said "yes" and 22% of them said that the program partly improved their English. Dokur also asked the teachers to evaluate this program via interview questions. The findings showed that the teachers seemed to be happy with the overall presentation of the product whereas they were not pleased with its content, the way the tasks were presented or the linguistic elements the software emphasized.

In her small scale study, Pinkman (2005) investigated the likely effects of a blog project as an out of class activity on the students' foreign language learning. The study aimed at providing implications for other Efl professionals integrating blogs into their foreign language classrooms. The project included 15 pre-advanced level students who were required to have at least a TOEFL score of 475 before being accepted to this class in Kwansei Gakuin University in Japan. In the initial phase of the project the students were presented a sample blog by the instructor, and then they were instructed on how to make their own blogs in a lab environment. The project then continued as an out of class activity. The questionnaires and interviews answered by the students indicated this

project was useful for language classes. Moreover, students agreed that feedback from classmates and the teacher increased their motivation and interest towards learning. Finally, it was found that some students were inclined to continue blogging even after the end of the semester. However, research on this issue is still not adequate.

Pekel (2002) conducted her research with 14 volunteer upper intermediate level students from Bilkent preparatory school, and she was one of the participants of this study as well. In this small-scale study, an experimental course which lasted for six weeks was designed to investigate students' attitudes toward web-based learning, and this course was carried out through e-mailing. The first instrument of the study was a questionnaire asking questions about students' learning styles, attitudes towards learning, attitudes towards computers and internet and their knowledge about learning on the internet. Since the student participants were small in number, Pekel interviewed them as well. The findings indicated that students' attitudes towards web-based independent learning were fairly positive, and there were no negative results as regards both the quantitative and qualitative analysis. Furthermore, students showed improvement in reaching the needed information themselves, which was a sign leading to learner autonomy.

In Arkın's (2003) study, again the teachers' attitudes towards CALL were investigated particularly on the basis of vocabulary instruction. The data was obtained from a Likert type questionnaire distributed to 97 teachers working at Eastern Mediterranean University. This study revealed the statistical differences between the attitudes of teachers who had computer training before and teachers who did not have any computer training. These two groups of teachers differed in terms of their

willingness to integrate computer technology resources into language teaching. That is to say, results drawn from the T-test analysis showed that the teachers who received computer training before were more willing to use computer technology in language teaching.

Next, Akçaoğlu (2008) conducted a study with 120 in-service and 62 pre-service ELT teachers at Middle East Technical University, Atılım University, Başkent University, Çankaya University and TOBB Education and Technology University. All preservice teachers were from Middle East Technical University. The researcher investigated the three aspects of technology integration in language teaching. These aspects were computer usage frequencies, computer competence levels, and attitudes towards computers. Both qualitative and quantitative data were obtained via a questionnaire and face-to-face interviews. The findings showed that the frequency of computer use of the teachers in the school was limited, however outside the school they used computer much more. It was also reported in the study that teachers' age, gender and work experience had an impact on their technology use and competence levels. Additionally, the data gathered indicated that the teachers in general considered computers and internet in language teaching as teacher tools which make their courses attractive rather than student tools. Only a couple of teachers interviewed talked about the use of computer in directing students to study on their own.

Although the above mentioned studies examined CALL perceptions none of them have explicitly looked at the roles of teachers in computer-assisted English courses. On the other hand, some studies on CALL compared teacher-led instruction with computer-assisted instruction.

First of all, Kılıçkaya (2005) investigated whether computer-assisted instruction has an effect on students' achievement on the TOEFL exam or not. The study was in the form of a quasi-experimental research, and there were two variables: computer-assisted instruction and teacher-led instruction. 34 sophomore students participated in the study. The experimental group consisted of 17 students, and the control group was formed of 17 participants as well. The experimental group was exposed to computer-assisted instruction in a language laboratory while the control group received traditional instruction. Both instruction periods lasted for 8 weeks. The same instructor led the instruction for 3 hours each week. In the first week, the researcher gave each group a pre-test and at the end of the study all participants were given a post-test. Both tests were statistically analyzed by the researcher, and then interviews were made. At the end of the study, it was found that there was no statistically significant difference between the two groups. Only reading and listening sections showed statistical difference: experimental group scored higher than the control group on the reading and listening sections. Lastly, one remarkable conclusion drawn from participants' answers to the interview was that computer-assisted language instruction should be integrated into regular classes.

Secondly, Tokaç's (2005) study compared the effectiveness of computer-assisted vocabulary instruction with teacher-led vocabulary instruction and the effectiveness of spaced repetition in both teacher-led vocabulary instruction and computer-assisted vocabulary instruction. Additionally, the study explored the strengths and weaknesses of the CALL vocabulary classes. The study was conducted in the School of Foreign Languages in Selçuk University with six classes consisting of a total of 76 students. In this experimental study, two classes were given computer-assisted vocabulary

instruction, two classes were given teacher-led instruction and the other two classes formed the control group. Same instructional materials were used in all groups to ensure validity and reliability. Both the control group and the teacher-led vocabulary instruction group studied vocabulary in a classroom environment while the computer-assisted vocabulary instruction group studied vocabulary in a computer environment. The teacher-led group learned and revised the target words using spaced repetition via teacher instruction, the computer group learned and revised the target words using spaced repetition via computers, and the control group learned the target words via teacher instruction while they revised vocabulary massively at one time and did not use spaced repetition. Pretests and posttests were implemented, and results were presented via two-way ANOVA. At the end of the study, neither computer group nor the teacher group showed significantly more vocabulary gains. Thus, computer-assisted vocabulary instruction was found to be as effective as teacher-led vocabulary instruction. The impact of the spaced repetition procedures on the vocabulary gains of both the teacher group and the computer group was also not at a significant level. Additionally, in order to investigate the possible strengths and the weaknesses of the computer- assisted vocabulary instruction, a questionnaire was given to the students. An examination showed that there was no difference among three groups' responses. Regarding the strengths and the weaknesses of CAVI (computer-assisted vocabulary instruction), inclusion of visual elements in multimedia annotations was perceived as the most effective feature of CAVI. Weaknesses of CAVI included the inefficacy of computer-provided feedback, the students' ineffective use of time and students' varied learning experiences of using computers for vocabulary learning. Moreover, students were given

five positive statements regarding teachers' role during computer-assisted vocabulary instruction. Two of the students answered as follows: "I was able to learn the words in the text easily with teacher help" and "While we were repeating and practicing the target words, the feedback and the clues my teacher provided were enough". All in all, the researcher just addressed the issue of vocabulary teaching with computers in her study.

Furthermore, Kaplan (2002) conducted a research about the effectiveness of computer-assisted language learning on a hundred and two vocational high school second grade students' grammar skills. In his experimental study which lasted for eight weeks in Gölbaşı Vocational High School of Gaziantep Besni University the researcher found that the experimental group consisting of forty three students studying by using both computers and a text book did not make a significant progress compared to the control group consisting of fifty nine students who followed only the text book.

Next, two researchers have examined aspects of CALL other than the ones mentioned above. Firstly, Abuseilek (2007) in his study mainly investigated the effectiveness of two computer-mediated techniques- cooperative and collective learning- designed for teaching and learning oral skills, listening and speaking at King Saud University in the department of English Language and Literature for sixteen weeks. In the collective computer-mediated technique, the interaction between the student and teacher is provided by the computer which is seen as a tool. Each student answers the questions on his/her own and reports the answers to the teacher. Moreover, they do not interact with each other in groups or pairs. That is to say, a teacher to the whole class method was adopted. On the other hand, in cooperative computer-mediated technique, teacher makes the students communicate with each other by dividing them into small

groups or pairs to perform a task on the computer. 66 students formed of two groups participated in this study. When these two techniques were compared it was found that cooperative computer mediated technique was more effective than collective technique in teaching oral skills. Additionally the researcher investigated students' attitudes towards using CALL to master oral skills. For this purpose, a Likert scale questionnaire was administered. The general attitude (83.3%) towards teaching oral skills via CALL was found to be encouraging. As a result, it is recommended that CALL should be integrated into oral skills curriculum.

Bingöl (2003) investigated which factors were effective in designing and during the implementation of web-based courses. The researcher did this study with nine web-based course designers most of whom were working in universities abroad because such courses are not commonly designed in Turkey. All these instructors had the experience of giving a web-based course except for one participant. Bingöl administered a questionnaire via email. All in all, it was revealed that the students' concerns, technical concerns and pedagogical concerns should be taken into account before designing and implementing any web-based courses.

The researcher has reviewed issues on computer-assisted language learning. It has been seen that no research studies have specifically looked at the role of teacher in computer-assisted language learning context. The study described in the next chapter aims to conduct such a research study.

2.13 Summary

This chapter was a review of the literature covering the uses and roles of computers in learning English, metaphors used for computers, meaningful teaching and

learning with computers, the roles of CALL teachers, the issues of learner vs. computer and leaner autonomy vs. teacher, training CALL teachers and previous studies conducted on CALL. The next chapter will describe the methodology of the study in terms of its setting, participants, instruments and data collection procedures.

CHAPTER 3

METHODOLOGY

This chapter gives a description of the methodology of the study, and includes seven sections: Overall design of the study, research questions, variables, setting and participants, development of data collection instruments, data collection procedure and data analysis are presented respectively.

3.1 Overall design of the study

The purpose of this study is to investigate university EFL preparatory school students' and teachers' perceptions of computer's role and teacher's role in CALL environment. In addition, background variables related to the students were observed to find out whether there were any significant differences among students' perceptions.

Survey method was used through administering two questionnaires developed by the researcher. Items used in the questionnaires were prepared according to the related literature, the informal interview results of the students and the researcher's own observations since she is a member of the Preparatory School community.

Two groups of participants formed the sample of the study. Zonguldak Karaelmas University Preparatory School students formed the first group, and the teachers in the same institution formed the second group.

Descriptive and inferential analyses were performed to obtain deeper insights into the research questions.

3.2 Research questions

The research questions of this study are as follows:

1. What are the dimensions of Effective CALL questionnaire as perceived by Preparatory school students?
    a. What are the dimensions of computer's role in language learning?
    b. What are the dimensions of teacher's role in CALL environment?
    c. What are the dimensions of students' expectations from the teacher in CALL environment?
2. Which dimension of the computer's role is given the most importance by the students?
3. Which dimension of the teacher's role is given the most importance by the students?
4. Which dimension of the students' expectations from the teacher is given the most importance by the students?
5. Is there any significant mean difference in the perceived dimensions of effective computer-assisted language learning preconditions with respect to gender, proficiency level, mother-father education level, computer-assisted course experience and using computer for studying English in free time?
6. What are the students' and teachers' perceptions of computer-assisted language learning environment?
7. What are the students' and teachers' perceptions of teacher's role in computer-assisted language learning environment?

3.3 Description of the variables

Gender: This variable is a dichotomous variable with categories of female (1) and male (2).

Mother and father education level: These variables are categorical variables with categories of elementary and/ or middle school (1), high school (2), and university and/or above (3).

Level of proficiency: This variable is a categorical variable with categories of B (elementary) level students (1), C (beginner) level students (2), and D (true beginner) level students (3).

Experience of computer-assisted course before: This variable is a dichotomous variable with categories of yes (1) and no (2).

Use of computer to study English outside class: This variable is considered as a dichotomous variable with categories of yes (1) and no (2).

3.4 Setting and participants

3.4.1 Setting

This study was conducted at Zonguldak Karaelmas University Foreign Languages Compulsory Preparatory School. This school is aimed at helping undergraduate students to acquire English language knowledge and skills for general purposes. The students will also be obliged to attend departmental courses in English. Students with different educational backgrounds attend this school. In other words, there are some students who already attended preparatory school in other institutions and some other forming the majority who did not receive enough English language education before coming to this school. For this reason, students first take a proficiency

exam at the beginning of each academic year. If they get a score over 60 in this exam, they are exempted from attending the preparatory class. On the other hand, if they are unsuccessful, they must take the placement test which is administered to place the students at the appropriate levels of the program at the beginning of the semester. This placement test consisted of three sections. The students who get an outstanding point from all three sections are placed in B level classes and the students who do well in the first two sections are placed in C level classes. The students who cannot achieve to get an outstanding point from the second and third sections are placed in D level classes. As a result of this placement test, three levels are formed at the Preparatory School: B level (elementary), C (beginner) and D (true Beginner).

The program adopted by this institution is a skill-based one that means the courses are based on the four skills (writing, reading, speaking and listening) in English learning. English teachers at the Preparatory School teach the *Success* (Carr, Hastings, McKinlay & Parsons, 2006) set (integrated skills book) which is composed of four books, in the main courses. A grammar book, *Milestones of English Grammar-Perfecting and practicing English structure* (Küçük, İnan & Saka et al. 2006) which is not compulsory for the students to study but it is given to the students at the beginning of each semester as a resource book. Additionally, teachers use two books *Milestones of Writing* (Z.K.U. teachers, 2008) in writing courses and *Let's Talk* (Jones, 2002) in speaking courses. Lastly, videos with levels ranging from elementary to upper intermediate are employed in the video courses. These videos are accompanied by video workbooks, *World Link* (Stampleski, Douglas, Morgan & Curtis, 2005) one and *World Link two* (Stampleski, Douglas, Morgan & Curtis, 2005).

Success set is accompanied by *Success and Longman English Interactive* (Rost, 2003) computer software (formed of four sections) some parts of which are parallel to the main course book. Students of all levels in Zonguldak Karaelmas University Preparatory School have to study English for eight hours each week. There are four levels, each of which consists of three modules: Module A, Module B and Module C. In every module, there are listening, speaking, grammar, vocabulary, pronunciation, reading and writing sections.

There are some problematic aspects of the software utilized in CALL lessons. First of all, students have access to all sections of each module except for the speaking section. Since the microphones are not working properly, it becomes impossible for the students to record their voice while doing the speaking activities. Secondly, the listening section consists of various dialogues which are not so relevant to the topics covered in the main course book "Success". That is to say, no parallelism has been ensured between the book and the software when listening activities are concerned. Moreover, students are not allowed to use the internet. Thus, they have limited resources for studying. In addition, at the end of each level there is a "comprehensive test" consisting of questions from all modules. However, students' comprehensive test scores are not included in their cumulative GPAs. In other words, students' performance in the lab is not evaluated at all. Therefore, neither the students nor the teachers place much stock on CALL lessons.

Moreover, the students can listen to the dialogues in CALL lessons since they have headphones but most of the time there are technical problems about the headphones. Lastly, students can check their answers in grammar section once they

finish doing the activities since software provides correct answers but it does not provide other alternative responses.

3.4.2 Participants

Two different groups of participants were included in this study. 310 students from Zonguldak Karaelmas University Foreign Languages Compulsory Preparatory School formed the first group, and 50 teachers who were working at the Prep School in the 2008-2009 academic year formed the second group. There were 966 students at the Preparatory School in the 2008-2009 academic year. 102 of them were B level students, 252 of them were C level students and 612 of them were D level students. Three classes from B level out of 5, 8 classes from C level out of 12, and 10 classes from D level out of 28 were selected considering the available time reported by the teacher. Therefore convenient sampling method was used. All students in these classes were administered the questionnaire.

Table 3.1 presents the background characteristics of participant students.

Table 3.1 Distribution of students by background variables

		N	%
1. Gender	Female	134	43.2
	Male	176	56.8
	Total	310	100
2. Levels	B Level Students	75	24.2
	C Level Students	95	30.6
	D Level Students	140	45.2
	Total	310	100
3. Mother Education Level	Elementary/Middle School	217	70.7
	High School	67	21.8
	University and Above	23	7.5
	Total	310	100
4. Father Education Level	Elementary/Middle School	138	47.3
	High School	94	32.2
	University and Above	60	20.5
	Total	310	100
5. Computer-Assisted Course Taken Before	Yes	73	23.7
	No	235	76.3
	Total	310	100
6. Use of Computer to study English outside class	Yes	56	18.2
	No	252	81.8
	Total	310	100

As it can be seen on Table 3.1 134 (43.2%) of the 310 students were female and 176 (56.8%) students were male. Among the 310 students 75 (24.2%) students were B level, 95 (30.6%) were C level and 140 (45.2%) were D level students. The total number of B level students is 102, and the study had been piloted with 27 B level students

before. Therefore, the number of B level participants was lower than the C and D level students.

Mother and father level of education of the students were categorized into three groups as “elementary and/or middle school level”, “high school” and “university and above”. Since the number of illetarate mothers and father was too low, they were grouped in the elementary level. For mother education level, out of 310 students, 217 (70.7%) students’ mothers graduated from elementary and/or middle school, 67 (21.8%) students’ mothers graduated from high school and 23 (7.5%) students’ mothers graduated from university and above. Three (1%) students did not provide any answers for mother education level.

For father education level, among 310 students, 138 (47.3%) students’ fathers graduated from elementary and/or middle school, 94 (32.2%) students’ fathers graduated from high school and 60 (20.5%) students’ fathers graduated from university and above. 18 (5.8%) students did not provide any answers for father education level.

Another background variable examined whether the students took a computer-assisted course before. Both students who took English CALL courses and those who took only basic computer skills courses at school before answered this question by saying “Yes”. Out of 310 students, 73 (23.7%) students’ answer was “Yes” while 235 (76.3%) students’ answer was “No”. Two (0.6%) students did not give any answers for this question.

Lastly, the students were asked whether they study English on the computer in their free time. Among 310 students, 56 (18.2%) students said “Yes” and 252 (81.8%) students said “No”. Two (0.6%) students did not provide any answers for this question.

Next, all 55 teachers were given the questionnaire but five of the questionnaires were not returned.

Table 3.2 shows the background information obtained from 50 teachers.

Table 3.2 Distribution of teachers by background variables

		N	**%**
1. Gender	Female	35	70
	Male	15	30
	Total	50	100
2. Teaching experience in Prep School	1 to 4 years	31	62
	5 to 8 years	17	34
	9 to 12 years	2	4
	Total	50	100
3. Department of graduation	English Language Teaching	34	68
	Other	16	32
	Total	50	100
4. Teaching with computers before	Yes	8	16
	No	42	84
	Total	50	20.5
5. Training in teaching with computers	Yes	21	42
	No	29	58
	Total	50	100

As shown in Table 3.2 among 50 teachers 35 (70%) were females and 15 were males (30%). The schools they graduated from were categorized in two groups as English Language Teaching department and other departments such as English Translation and Interpretation department (2 teachers), English Language and Literature department (10 teachers) and American Culture and Literature department (4 teachers). 34 (68%) teachers out of 50 graduated from English Language Teaching department.

Meanwhile, the other 16 (32%) teachers graduated from other above mentioned departments.

Teachers' teaching experience at the Preparatory School was identified within three categories. Out of 50 teachers 31 (62%) teachers worked for 1 to 4 years, 17 (34%) worked for 5 to 8 years and 2 (4%) worked for 9 to 12 years at the Preparatory School.

The next variable examined whether teachers taught English with computers before they started to work at Zonguldak Karaelmas University Preparatory School. 8 (16%) teachers answered this question by saying "Yes", and 42 (84%) teachers answered this question by saying "No".

The last variable investigated whether the teachers received any training before teaching with computers. Out of 50 teachers 21 (42%) responded this question as "Yes", and 29 (58%) responded as "No". Teachers responding "yes" to this question are the ones who got one-day training in how to get access to the sections on the computer.

3.5 Data collection instruments

According to Dörnyei (2003), "Questionnaires are uniquely capable of gathering a large amount of information quickly in a form that is readily processable."(p.1) Thus, this study employed two questionnaires to collect data on the students' and teachers' perceptions of CALL practices in Zonguldak Karaelmas University Preparatory School in a short amount of time.

3.5.1 Development of the questionnaires

The Effective Computer-Assisted Language Learning Questionnaires, one for the students and one for the teachers, (ECALLQ) were developed by the researcher.

In the process of developing the questionnaires, the literature on CALL and some researchers' point of views on teacher's role in CALL were reviewed to select appropriate items for questionnaires (Ashburn, 2006; Beatty, 2003; Chappelle, 2001; Darling-Hammond, 2000; Egbert & Petrie, 2005; Fotos & Browne, 2004; Hubbard, 2004; Lasagabaster & Sierra, 2003; MchTighe, Seif, and Wiggins, 2004; Pratt, Lai & Munro, 2001; Stracke-Elbina, 1998).

Additionally, class discussions were held with students in two different classes to derive their perceptions on the use of CALL. Tape or video recording would be uncomfortable on the aspect of students since it was observed in a trial by the researcher that the students kept silent. Therefore, the procedure of gathering data was manual note taking, and before the end of each session of the discussions students wrote their suggestions on a piece of paper regarding the CALL applications in the institution and regarding teacher's role in CALL environment. These contributed much to both item creation and the face validity of the students' questionnaire.

Next, the researcher was one of the teachers working in the institution where this study took place. As a result, the researcher's own observations and experience contributed to the development of the questionnaires as well.

3.5.1.1 Students' questionnaire

Based on the literature review and the class interviews, the student questionnaire consisting of four parts (see Appendix A for the Turkish version and Appendix B for the English version) was developed. The first part aimed to gather data about students' backgrounds. The next three parts were independent from each other. The second part was named as computer's role subscale and the students were expected to answer 21

items about their perceptions of computer's role in language learning. The third part was the teacher's role subscale which included fifteen items related to the students' perceptions of the teacher's role in CALL. The fourth part aimed at uncovering the students' expectations subscale and it included ten items concerning the students' expectations from the teachers in CALL. Especially, this subscale was developed by considering the data gathered through the class discussions and students' written reports. The last version of the students' questionnaire included 46 items which were presented on a five-point Likert scale ranging from "Strongly Agree" (5) to "Strongly Disagree" (1). The midpoint was "Undecided" (3).

3.5.1.2 Teachers' questionnaire

Based on the literature review, the researcher's observations, experience, and the suggestions of three expert teachers, a questionnaire consisting of four sections (see Appendix C) was created for the teachers. In the first part, some background information was requested. The second part of the questionnaire was computer's role subscale including twenty items related to the teachers' perceptions of computer's role in language learning. The third part of the teachers' questionnaire consisted of sixteen items aiming to gather information about teachers' perceptions of teacher's role in CALL. In the fourth part of the questionnaire, teachers were asked to answer five open-ended questions concerning the CALL practices in their institution. The last version of the questionnaire included thirty-six items that were presented on a five-point Likert scale ranging from "Strongly Agree" (5) to "Strongly Disagree" (1). The midpoint was "Undecided" (3).

Afterwards both students' and teachers' questionnaires were given to three academicians in order to determine whether the statements were clear and sufficient in identifying perceptions of CALL. One these academicians has a doctorate degree and the other two have master degrees in English language teaching. These academicians have done much of the academic work in the Preparatory School for more than five years. With the help of the academicians' views, content and face validity were assured. Finally, some statements were reformulated.

3.5.2 Pilot testing of the questionnaires

First of all, the students' questionnaire was piloted with 158 students (including students from B, C and D levels) at the end of March. The students who participated in the piloting were asked to fill out the questionnaire and make comments about the statements for clarity. This process also provided content validity.

Principal component analysis was conducted by varimax method to examine the dimension of three subscales of students' ECALLQ.

The rotated solution for each subscale was evaluated in terms of content. It was observed that the items were grouped meaningfully. Results revealed three dimensions for both *computer's role* subscale and *teacher's role* subscale of the questionnaire. For the third subscale, *students' expectations from the teacher,* two dimensions were found.

The students' questionnaire was checked for its reliability. The reliability coefficient (Cronbach alpha) of the first subscale of the questionnaire was computed as .83, and the reliability coefficient of the second subscale was found to be .80. Next, the reliability coefficient was calculated as .82 for the last subscale of the questionnaire. These coefficients are higher than .70, which is the lowest limit for reliability in social

sciences (Hair, Anderson, Tatham & Black, 1998). That is to say, the computations indicated that the scale had a moderate internal consistency. What is more, after examining the "item deleted" tables for each subscale, it was found that deletion of none of the items would increase the reliability of these subscales. The principal component analysis also provided evidence for construct validity of the student questionnaire.

Five teachers working in the preparatory school were given the teacher's questionnaire with the aim of identifying irrelevant and ambiguous items. When the questionnaires were returned no irrelevancy or ambiguity as to the nature of the items was reported.

3.6 Data collection procedure

Permission to administer the questionnaires was obtained from METU Human Subjects Ethics Committee on 7th April, 2009. Meanwhile, permission from the coordinators of Zonguldak Karaelmas University Preparatory School was taken. The questionnaires were administered in the second week of April, 2009. The researcher herself was responsible for the delivery of the questionnaires and distributed them during the students' class hours. First the Turkish manuscript of the questionnaire was developed and given the students the students were not proficient enough in English to understand the items and they would feel themselves comfortable in this way. Moreover, the teachers were given one week to fill in the English version of the teacher's questionnaire. Filling out the students' questionnaire took approximately 15 minutes.

3.7 Data analysis

Frequencies and percentages were used to analyze data related to background information provided by both students and teachers.

Factor analysis was used as a data reduction and classification method. Principal component analysis with varimax rotation was carried out in order to identify the underlying dimensions which explained the responses of the students' to the questionnaire. Principal components analyses were conducted for each subscale of students' questionnaire separately.

In order to analyze research question two and three and to understand which dimensions of the computer's role and teacher's role in CALL were given priority by students, one-way repeated measures ANOVA was used.

As the fourth subscale consisted of only two dimensions, paired samples t-test was used to analyze research question four in order to understand which dimension of the students' expectations from the teacher in CALL was given the most importance by the students.

Multivariate analysis of variance (MANOVA) analysis was used to answer research question 5. MANOVA was employed to examine whether students' gender, proficiency level, mother-father education level, computer-assisted course experience and using computer to study English in their free time had a significant effect on their perceptions of each dimensions of effective CALL. The reason of using Pillai's Trace was that random sampling, multivariate normality and homogeneity of variance assumptions of MANOVA could not be met by the data set.

Descriptive statistics – means and standard deviations- were employed to analyze the data collected through the teachers' questionnaire. In addition, descriptive statistics were used to compare teachers' and students' perceptions of the computer's and teacher's role in CALL.

Next the qualitative data gathered from open-ended questions from the two questionnaires was analyzed by the researcher. Both students' and teachers' responses were categorized according to the key words and common themes and entered in tables.

All the statistical procedures were performed by Statistical Package for the Social Sciences (SPSS) for Windows 15.0 package program. The .05 level was supposed to be the criterion of statistical significance for the statistical analyses carried out.

CHAPTER 4

RESULTS

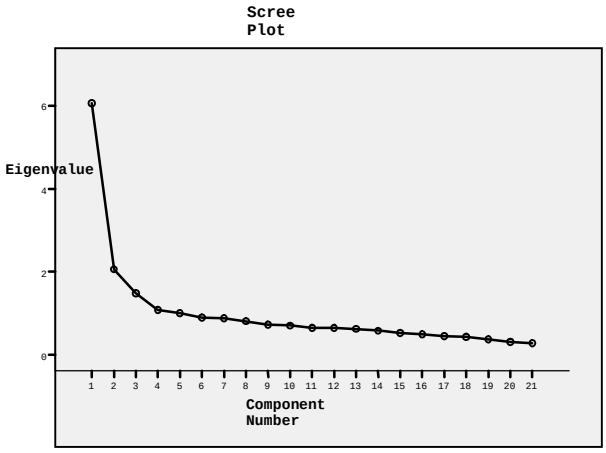
This study is devoted to investigate university EFL preparatory school students' and teachers' perceptions of computer's role and teacher's role in CALL environment. In addition, the study aims to examine whether the students' perceptions vary with respect to certain background variables (gender, proficiency level, mother-father education, computer-assisted course taken before, use of computer to study English outside class). Lastly, both students' and teachers' perceptions on some common issues are enlightened. The students' and the teachers' answers to the open-ended questions are also pointed out.

4.1 Results of the principal component analysis

Principal component analysis with varimax rotation was employed for each of the three subscales separately to find the perceived dimensions of the student questionnaire. When the rotated solution was evaluated for 46 items, it was observed that the first section labeled "computer's role" had five factors, the second section labeled "teacher's role" had four factors and the third section labeled "students' expectations from the teacher" had two factors with eigenvalues above one. It was observed that according to the scree test there were three factors with eigenvalues in the sharp descent part of the plot for section one.

Based on the scree plot in figure 4.1, it was concluded that three factors should be rotated for the first section of the questionnaire. In addition, these factors were observed to be meaningfully grouped.

Figure 4.1 Figure of factor analysis related to computer's role subscale



The three dimensions in subscale one "computer's role" explained 47.35% of the total variance. The first dimension "overall effect of computer" explained 29.75% of variance and the other two dimensions explained 10.24% and 7.36% of variance respectively. The ranges of factor loading for each dimension were: .726 - .343 for the first, .703 - .529 for the second and .769 - .464 for the third dimension respectively. The Cronbach's alpha for reliability was found .85.

Ranges of factor loadings for each dimension in the first subscale of the student questionnaire are presented in Table 4.1.

Table 4.1 Factor loading of the items in computer's role subscale obtained via principle component analysis with varimax rotation

ITEMS	F1	F2	F3
Overall effect of computer			
Is not useful for studying English in the lab	**.726**	.250	.162
Is not motivating for studying English	**.724**	.113	.234
Is effective in letting me see my incompetence in English	**.672**	.278	.110
Is effective in my learning new subjects	**.639**	.161	.001
All alone is useful for my learning English	**.626**	.284	-.062
Is a complementary factor for learning English	**.606**	.179	-.055
Not useful for solving my unanswered questions about English	**.545**	.241	.257
Is no different from a book on the aspect of my learning English	**.343**	.106	.181
Language skills			
The listening activities in the computer are effective in my learning English	.174	**.703**	.023
The vocabulary activities in the computer are effective in my learning English	.256	**.687**	.100
The pronunciation activities in the computer are effective in my learning English	.120	**.675**	.117
The speaking activities in the computer are effective in my learning English	.042	**.622**	-.001
The reading activities in the computer are effective in my learning English	.345	**.614**	.018
The writing activities in the computer are effective in my learning English	.346	**.581**	.054
The dictionaries in the computer are effective in my learning English	.177	**.558**	.116
The grammar activities in the computer are effective in my learning English	.414	**.529**	-.078
Motivation			
Decreases when my unsolved questions are not explained by the computer	.018	.085	**.769**
Decreases because of the questions with no answers in the computer	.019	.208	**.765**
Decreases because of technical problems about computers	-.056	-.014	**.613**
Decreases because of studying on computer for 50 minutes without any break	.294	-.025	**.525**
Decreases because of computer's limiting my interaction with the classmates	.226	.009	**.464**

The item with range .343 was placed under the first dimension. This item was acceptable because the sample size in this study is bigger than 250 (Field, 2005).

The four dimensions in the second subscale "teacher's role" explained 55.3% of variance. The first dimension "teacher guidance" explained 28.2% of variance and the

other three dimensions explained 11.9%, 7.7 % and 7.5% of variance respectively. The ranges of factor loadings were .734 - .623, .689 - .458, .809 - .622 and.-752 - .522 for the four dimensions respectively. However, the fourth dimension of this section consisted of one item which did not meet the preconditions of being a factor. As a result, the number of the factors was reduced to three. Ranges of factor loadings for three dimensions are shown in Table 4.2 below.

Table 4.2 Factor loading of the items in teacher's role subscale obtained via principle component analysis with varimax rotation

ITEMS	F1	F2	F3
Teacher guidance			
Makes me study more enthusiastically	**.696**	.170	.290
Makes me learn better in lab	**.692**	.412	-.136
With feedback enables me to study more efficiently	**.651**	.326	-.081
Enables me to adjust my learning style to computer use	**.650**	.088	.007
Teacher's telling which activities to do in each lab lesson increases my success	**.643**	.030	.333
With teacher assistance I compensate for my language incompetence better	**.576**	.469	-.048
Teacher assistance			
Helps me to continue with my study comfortably	.415	**.652**	-.189
Provides better explanations about my mistakes than computer	.091	**.648**	.117
While reading passages makes me understand them better	-.011	**.635**	.264
In person makes me learn better	.201	**.608**	.013
Makes me do the writing sections more easily	.174	**.539**	.153
Providing me for unknown words makes me learn easier in lab lessons	.197	**.454**	-.083
Teacher presence			
Makes me complete the online activities in lab	-.048	-.021	**.813**
Makes me concentrate on the lab lesson	.290	.006	**.744**
Makes me come to the lab lessons	-.026	.186	**.617**

As can be seen from the table, the ranges of factor loading were .696 - .576, .652 - .454 and .813 - .617 for the three dimensions respectively. Next, items clustered within each dimension were examined in terms of their content. The investigation of item

content revealed that the items loaded meaningfully to the dimensions except for the item "*With teacher assistance I compensate for my language incompetence better*". This item was under teacher guidance dimension, yet it is directly related to teacher assistance dimension with .469 factor loading. New dimensions are presented in Table 4.3.

Table 4.3 Factor loadings of the items in teacher's role subscale obtained via principle component analysis with varimax rotation

ITEMS	F1	F2	F3
Teacher guidance			
Makes me study more enthusiastically	**.696**	.170	.290
Enables me to learn better in lab	**.692**	.412	-.136
With feedback provides me to study more efficiently	**.651**	.326	-.081
Enables me to adjust my learning style to computer use	**.650**	.088	.007
Teacher's telling which activities to do in each lab lesson increases my success	**.643**	.030	.333
Teacher assistance			
With teacher assistance I compensate for my language incompetence better	.576	**.469**	-.048
Helps me to continue with my study comfortably	.415	**.652**	-.189
Provides better explanations about my mistakes than computer	.091	**.648**	.117
While reading passages makes me understand them better	-.011	**.635**	.264
In person makes me learn better	.201	**.608**	.013
Makes me do the writing sections more easily	.174	**.539**	.153
Providing with the definitions of unknown words makes me learn easier in lab lessons	.197	**.454**	-.083
Teacher presence			
Makes me complete the online activities in lab	-.048	-.021	**.813**
Makes me concentrate on the lab lesson	.290	.006	**.744**
Makes me come to the lab lessons	-.026	.186	**.617**

Cronbach's alpha was found .80 for this section, namely, as "teacher's role".

The two dimensions in the third subscale "students' expectations from the teacher" explained 53% of the variance. The first dimension called "activities guided by

the teacher" explained 40.1% of the variance, and the second dimension explained 12.9% of the variance. The ranges of factor loading for these dimensions were .836 - .628 for the first and .750 - .543 for the second dimension. Cronbach's alpha was found .82.

Table 4.4 Factor loadings of the items in students' expectations subscale obtained via principle component analysis with varimax rotation

ITEMS	F1	F2
Activities guided by the teacher		
I get motivated if the teacher creates rivalry among students with various games or activities	**.836**	.067
Lab lessons become more efficient if the teacher makes us play vocabulary games in the last 15 or 20 minutes.	**.818**	.057
I get more interested in lab lessons if the teacher awards the ones who get the highest grades from common activities	**.672**	.232
I learn more easily if the teacher gets us to do enjoyable and instructional exercises in groups	**.653**	.256
I learn better if the teacher makes us do pronunciation activities	**.641**	.266
Teacher's making us study in groups makes me study better while increasing rivalry among students	**.628**	.337
Guidance		
My interest in lab activities increases if the teacher explains the aims and goals of the lab course to me	.039	**.750**
Lab lesson becomes more efficient if the teacher gives me assignments	.136	**.659**
If the teacher makes us revise the subjects we learn in class in lab courses I learn better	.297	**.607**
If the teacher guides us to study at the same time, the lab lesson becomes more effective	.411	**.543**

4.2 Results concerning the priorities of students in the dimensions of computer's role in CALL environment

Research question two was "which dimension of computer's role in learning English is given the most importance by the students?" With the purpose of determining the priorities of the students in terms of the dimensions in computer's role subscale and to find out if there are significant differences among the dimensions of computer's role

one way repeated-measures ANOVA was run. The three examined dimensions were overall effect of computer (Oec), language skills (Ls) and motivation (M).

As Field (2005) reported that "if Mauchly's test statistic is significant (i.e. p< 0.5), we should conclude that there are significant differences between the variances of differences; ergo the condition of sphericity is not met" (p.429). According to the Mauchly's test statistics in this study, it was observed that the sphericity assumption of repeated measures ANOVA was violated ($X^2(2) = 60.6$, $p < 0.5$) in this study. Therefore, Greenhouse-Geisser estimates of sphericity was analyzed. Greenhouse-Geisser value was above 0.05 ($\varepsilon = .85$) which indicated that homogeneity assumption was satisfied. Thus, it can be concluded that the data did not signify a deviation from sphericity. $F(1.70, 520.52) = 227.35$, $p < .05$, $\omega^2 = .616$. The univariate tests for within subject effects also indicated that all four tests coincided with each other (See Table 4.5).

Table 4.5 Tests of within-subjects effects of the dimensions of computer's role

		df	F	*p*	η^2
Dimensions of Computer's Role (Section 1)	Sphericity Assumed	2.00	227.35	.000*	.425
	Greenhouse-Geisser	1.70	227.35	.000*	.425
	Huynh- Feldt	1.70	227.35	.000*	.425
	Lower-bound	1.00	227.35	.000*	.425

* Significant at the .05 level.

In order to learn whether or not there is a significant difference among the means of dimensions, Wilk's Lambda was employed as a multivariate test. As the main purpose was to find out which dimension of computer's role was given the greatest importance by the students, repeated contrast was used. Moreover, Bonferroni multiple comparisons were employed since it is robust to Type 1 error (Field, 2005).

As can be seen in Table 4.6 the follow-up multivariate tests indicated a significant overall difference among the mean scores of the three dimensions of computer's role section of the questionnaire (λ=.43, F (2, 306) =204.15, p<.001, η^2=.572).

Table 4.6 Multivariate tests of the dimensions of computer's role

	Value	F	Hypot Df	Error Df	*p*	η^2
Dimensions of Computer's Role (Section 1)	.43	204.15	2.00	306.00	.000*	.572

*Significant at the .05 level

A follow-up pairwise comparison was employed to investigate the mean differences among the dimensions in detail (See Table 4.7).

Table 4.7 Pairwise comparisons of the dimensions of computer's role

Mean Differences		Std. Error	*p*
Oec- Ls	-.520* .549*	.038	.000
Oec- M	1.7*	.54	.000
Ls- M		.56	.000

Oec: Overall effect of computer; Ls: Language skills; M: motivation * Significant at .05 level

The pairwise comparions showed significant mean differences between overall effect of computer and language skills, overall effect of computer and motivation and language skills and motivation. Thus, by examining the mean scores (See Table 4.8) the dimensions of computer's role in learning English can be arranged in terms of priority as (1) language skills (M=3.63, SD=.72), (2) overall effect of computer (M=3.12, SD=.77) and (3)motivation of computer for learning English (M=2.57; SD=.83).

Table 4.8 Descriptive statistics of the dimensions of computer's role

Dimensions	M	SD	N
Overall effect of computer	3.12	.77	308
Language Skills	3.63	.72	308
Motivation	2.57	.83	308

4.3 Results concerning the priorities of students in the dimensions of the teacher's role in CALL environment

Research question three was "which dimension of the teacher's role in learning English is given the most importance by the students?" In order to identify the priorities of the students concerning the dimensions in section two "teacher's role" and to find out if there are significant differences among the dimensions of teacher's role section one way repeated-measures ANOVA was run. Teacher guidance (Tg), teacher assistance (Ta) and teacher presence (Tp) were the three dimensions analyzed in this section.

According to the Mauchly's test it was observed that the sphericity assumption of repeated measures ANOVA was violated ($X^2(2) = 112.6$, $p < 0.5$) in this section. Therefore, Greenhouse-Geisser estimates of sphericity were examined. Greenhouse-Geisser value was above 0.05 ($\varepsilon = .76$). Thus, it can be concluded that the data did not signify a deviation from sphericity. F (1.53, 469.49) =128.94, $p < .05$, $\omega^2 = .616$. The univariate tests for within subject effects also indicated that all four tests coincided with each other (See Table 4.9).

Table 4.9 Tests of within-subjects effects of the dimensions of teacher's role

		df	F	*p*	η^2
Dimensions of Teacher's Role (Subscale 2)	Sphericity Assumed	2.00	128.94	.000*	.296
	Greenhouse-Geisser	1.52	128.94	.000*	.296
	Huynh- Feldt	1.53	128.94	.000*	.296
	Lower-bound	1.00	128.94	.000*	.296

*Significant at the .05 level

In order to learn whether or not there is a significant difference among the mean values of the dimensions, Wilk's Lambda was employed as a multivariate test. Since the

main purpose was to find out which dimension of teacher's role was given the greatest importance by the students, repeated contrast was used. Moreover, Bonferroni multiple comparisons were employed in this subscale.

As can be seen in Table 4.10 the follow-up multivariate tests indicated a significant overall difference among the mean values of the three dimensions in teacher's role subscale of the questionnaire (λ=.43, F (2, 306)=204.15, p<.001, η^2=.531).

Table 4.10 Multivariate tests of the dimensions of teacher's role

	Value	F	Hypot Df	Error Df	*p*	η^2
Dimensions of teacher's role	.47	173.08	2.00	306.00	.000*	.531

*Significant at the .05 level

A follow-up pairwise comparison was employed to investigate the mean differences among the dimensions in detail (See Table 4.11). The pairwise comparions showed significant mean differences between teacher guidance and teacher assistance, teacher guidance and teacher presence and teacher assistance and teacher presence (See Table 4.11).

Table 4.11 Pairwise comparisons of the dimensions of teacher's role

Mean Differences		Std. Error	*p*
Tg- Ta	-.593*	.039	.000*
Tg- Tp	.342*	.068	.000*
Ta- Tp	.936*	.065	.000*

Tg: Teacher guidance; Ta: Teacher assistance; Te: Teacher presence
Significant at .05 the level

Thus, by examining the mean scores (See Table 4.12) the dimensions of teacher's role in learning English can be arranged in terms of priority as (1) teacher assistance (M=3.84, SD=.66), (2) teacher guidance (M=3.24, SD=.82) and (3) teacher presence (M=2.90,SD=1.04).

Table 4.12 Descriptive statistics of the dimensions of teacher's role

Dimensions	M	SD	N
Teacher Guidance	3.24	.82	308
Teacher Assistance	3.84	.66	308
Teacher Presence	2.90	1.04	308

4.4 Results concerning the priorities of students in the dimensions of their expectations from the teacher' role

Research question four was "which dimension of the students' expectations from the teacher while they are learning English via computers is given the most importance by the students?" In order to find out whether the mean difference between the two dimensions in subscale three "students' expectations from the teacher" is significantly different from zero, paired samples t-test was run (Green & Salkind, 2005). Lab activities guided by the teacher (La) and overall guidance (Og) were the two dimensions investigated in this subscale.

The paired samples t-test results indicated that the mean concern for lab activities guided by the teacher (M=3.67, SD=.87) was significantly greater than the mean concern for overall guidance throughout the lab course (M=3.18, SD=.83), $t(306)=10.00$, $p < .05$. The 95% confidence interval for the mean difference between the two ratings was .39 to .58.

P values related with paired samples t-test and repeated measures ANOVA always come up with the same results. However, one advantage of repeated measures ANOVA over paired samples t-test is that it computes the effect size statistics, η^2 (Green & Salkind, 2005) as well. Thus, when repeated measure was employed η^2 was found to be .246.

Table 4.13 Descriptive statistics of the dimensions of students' expectations from the teacher

Dimensions	M	SD	N
Lab activities	3.67	.87	307
Overall guidance	3.18	.83	307

4.5 Results concerning the mean differences among the perceived dimensions of ECALLQ with respect to certain background variables of students

Research question five examined the differences in the perceived dimensions of effective CALL questionnaire with respect to students' background variables (1. gender, 2. their proficiency levels, 3. mother and father education levels, 4.experience of computer-assisted course before and 5. use of computer to study English in their free time). With the purpose of observing whether all the eight dimensions in ECALLQ varied with some background variables, Multivariate Analysis of Variances were performed.

In MANOVA, it is assumed that homogeneity of variance is accepted as roughly equal for each dependent variable as in ANOVA. In addition, the equality of the correlation between any two dependent variables assumption must be satisfied in MANOVA analyses (Field, 2005, p. 593). According to Bray and Maxwell (1985, cited in Field, 2005, p. 594) Pillai's Trace test is the most accurate test for MANOVA

analyses since it is robust to the violations of these assumptions. Thus, Pillai's Trace rather than Wilks' Lambda was used in this analysis.

4.5.1 Gender

4.5.1.1 MANOVA for computer's role subscale with respect to gender

A one-way multivariate analysis of variance was performed to find out the effect of gender on the three dimensions of computer's role subscale in ECALLQ. The result of MANOVA is presented in Table 4.14.

Table 4.14 The results of multivariate test for the overall effect of gender on the perceived dimensions of computer's role in ECALLQ

Effect		Value	F	Hypot Df	Error Df	*p*	η^2
Gender	Pillai's Trace	.006	.573	3.00	304.00	.633	.006

*Significant at the .05 level

The results indicated that gender did not have a significant effect on overall perceived dimensions of computer's role subscale in ECALLQ [Pillai's trace=.006, *F* (3, 304) =.573, p> .05, η^2 =.006].

Analysis of variance on each dependent variable was employed as a follow-up test to MANOVA. The univariate tests revealed that there was no significant effect of gender on overall computer effect, language skills and motivation (See Table 4.15).

Table 4.15 Univariate F test computed for the three dimensions of computer's role subscale in ECALLQ with respect to gender

	Dimensions of computer's role	df	F	*p*	η^2
GENDER	Overall Effect of Computer	1	.313	.576	.001
	Language Skills	1	.697	.404	.002
	Motivation	1	1.319	.252	.004

*Significant at the .05 level

Furthermore, the mean and standard deviations of gender for each of the three dimensions were given in Table 4.16. As can be seen from the table, language skills are the mostly agreed dimension by both females and males.

Table 4.16 The means and standard deviations of the perceived dimensions of computer's role subscale in ECALLQ with respect to gender

Dimensions of computer's role	Gender	M	SD
Overall effect of computer	female	3.14	.675
	male	3.10	.840
Language Skills	female	3.68	.667
	male	3.61	.751
Motivation	female	2.63	.820
	male	2.52	.839

4.5.1.2 MANOVA for teacher's role subscale with respect to gender

A one-way multivariate analysis of variance was performed to find out the effects of gender on the three dimensions of teacher's role subscale in ECALLQ. The results of MANOVA are presented in Table 4.17.

Table 4.17 The results of multivariate test for the overall effect of gender on the perceived dimensions of teacher's role subscale ECALLQ

Effect		Value	F	Hypot Df	Error Df	*p*	η^2
Gender	Pillai's Trace	.022	2.23	3.00	304.00	.085	.022

*Significant at the .05 level

The results indicated that gender did not have a significant effect on overall perceived dimensions of teacher's role subscale in ECALLQ [Pillai's trace=.022, F (3, 304) =2.23, p> .05, η^2 =.022].

Analysis of variance on each dependent variable was employed as a follow-up test to the MANOVA. However, the univariate test failed to find any significant effects of gender on teacher guidance, teacher assistance, and teacher presence (See Table 4.18).

Table 4.18 Univariate F test computed for the three dimensions of teacher's role subscale in ECALLQ with respect to gender

	Dimensions of teacher's role	df	F	*p*	η^2
GENDER	Teacher guidance	1	.34	.559	.001
	Teacher assistance	1	.96	.328	.003
	Teacher presence	1	3.70	.055	.012

The mean and standard deviations for each of three dimensions were given in Table 4.19.

Table 4.19 The means and standard deviations of the perceived dimensions of teacher's role subscale in ECALLQ with respect to gender

Dimensions of teacher's role subscale	Gender	M	SD
Teacher guidance	female	3.21	.747
	male	3.27	.873
Teacher assistance	female	3.88	.604
	male	3.81	.704
Teacher presence	female	2.77	.984
	male	2.33	1.084

4.5.1.3 MANOVA for students' expectations from the teacher subscale with respect to gender

A one-way multivariate analysis of variance was performed to find out the effects of gender on the two dimensions of students' expectations from the teacher subscale in ECALLQ. The results of MANOVA are presented in Table 4.20.

The results of MANOVA indicated that the gender had no significant effect on overall perceived dimensions of students' expectations from the teacher subscale in ECALLQ [Pillai's trace=.010, F (2, 304) =1.46, p> .05, η^2 =.010] (See Table 4.20).

Table 4.20 The results of multivariate test for the overall effect of gender on perceived dimensions of students' expectations from the teacher subscale in ECALLQ

Effect		Value	F	Hypot Df	Error Df	*p*	η^2
Gender	Pillai's Trace	.010	1.46	2.00	304.00	.234	.010

*Significant at the .05 level

Analysis of variance on each dependent variable was employed as a follow-up test to MANOVA. However, the univariate test failed to find any significant effects of gender on lab activities guided by the teacher and overall guidance (See Table 4.21).

Table 4.21 Univariate F test computed for the three dimensions of students' expectations from the teacher subscale in ECALLQ with respect to gender

	Dimensions of students' expectations	df	F	*p*	η^2
GENDER	Lab activities guided	1	.057	.812	.000
	Overall guidance	1	1.821	.178	.006

*Significant at the .05 level

The means and standard deviations of gender for the two dimensions are given in Table 4.22 indicating that lab activities guided by the teacher are given the most importance by the students (See Table 4.22).

Table 4.22 The means and standard deviations of the perceived dimensions of students' expectations from the teacher subscale in ECALLQ with respect to gender

Dimensions of student's expectations from the teacher subscale	Gender	M	SD
Lab activities guided	female	3.66	.840
	male	3.69	.903
Overall guidance	female	3.26	.779
	male	3.13	.870

4.5.2 Proficiency Level

4.5.2.1 MANOVA for computer's role subscale with respect to proficiency level

A one-way multivariate analysis of variance was run to determine the effects of proficiency level (B, C and D) on the three dimensions of computer's role in ECALLQ. The results of MANOVA are presented in Table 4.23. The analysis showed that proficiency level had a significant overall effect on the perceived dimensions of computer's role in ECALLQ [Pillai's trace=.047, F (6, 608) =2.48, p< .05, η^2 =.024].

Table 4.23 The results of multivariate test for the overall effect of proficiency levels on perceived dimensions of computer's role subscale in ECALLQ

Effect		Value	F	Hypot Df	Error Df	*p*	η^2
Level	Pillai's Trace	.047	2.48	6.00	608.00	.024*	.024

*Significant at the .05 level

In order to investigate the effect of proficiency level on each variable analysis of variance was performed as a follow-up test to MANOVA (See Table 4.24). ANOVA indicated that there was no significant effect of proficiency level on the perceived dimensions of computer's role subscale [F (2, 300) =1.534 p > .05, η^2 =.010].

Table 4.24 Univariate F test computed for the three dimensions of computer's role subscale in ECALLQ with respect to proficiency level

	Dimensions of ECALLQ	df	F	*p*	η^2
PROFICIENCY LEVEL	Overall Effect of Computer	2	1.47	.232	.010
	Language Skills	2	2.77	.064	.018
	Motivation	2	.50	.610	.003

*Significant at the .05 level

In Table 4.25, the means and standard deviations of the dependent variables for the three proficiency levels are shown. When the results were examined it was observed that B level students gave much more importance to the overall effect of computer,

language skills studied on the computer and motivation dimensions compared to the C and D level students. Since B level students are more competent in using computer to study English on their own (See Table 4.25). Yet, they also have problems regarding "motivation".

Table 4.25 The means and standard deviations of the perceived dimensions of computer's role subscale in ECALLQ with respect to proficiency level

Dimensions of ECALLQ	Proficiency Level	M	SD
Overall effect of computer	B level	3.22	.81
	C level	3.15	.79
	D level	3.04	.73
Language skills	B level	3.73	.74
	C level	3.50	.76
	D level	3.68	.65
Motivation	B level	2.64	.88
	C level	2.51	.83
	D level	2.57	.80

4.5.2.2 MANOVA for teacher's role subscale with respect to proficiency level

A one-way multivariate analysis of variance was run to determine the effects of proficiency level on the three dimensions of teacher's role in ECALLQ. The analysis showed that proficiency level had an overall significant effect on the dimensions of teacher's role [Pillai's trace=.044, F (6, 608) =2.26, p< .05, η^2 =.022] (See Table 4.26).

Table 4.26 The results of multivariate test for the overall effect of proficiency level on the perceived dimensions of teacher's role subscale in ECALLQ

Effect		Value	F	Hypot Df	Error Df	*p*	η^2
Level	Pillai's Trace	.044	2.26	6.00	608.00	.036*	.022

*Significant at the .05 level

In order to investigate the effect of proficiency level on each variable analysis of variance was performed as a follow-up test to MANOVA. It was found that there was a

significant effect of proficiency level on teacher assistance dimension of teacher's role subscale [F (2, 305) =4.28 $p < .05$, $\eta^2 = .027$] (See Table 4.27).

Table 4.27 Univariate F test computed for the three dimensions of teacher's role subscale in ECALLQ with respect to proficiency level

	Dimensions of teacher's role	df	F	*p*	η^2
PROFICIENCY LEVEL	Teacher guidance	2	2.76	.065	.018
	Teacher assistance	2	4.28	.015*	.027
	Teacher presence	2	1.37	.256	.009

*Significant at the .05 level

Post hoc analysis was employed to univariate ANOVA with Bonferonni test for the three dimensions of teacher's role subscale. According to the results, significant mean difference was observed between B and D level students in terms of teacher assistance dimension. On the other hand, no significant mean difference was found among B, C and D level students in terms of teacher guidance and teacher presence dimensions (See Table 4.28).

Table 4.28 The mean differences among the dimensions of teacher's role subscale in ECALLQ with respect to proficiency level

Dependent Variable		Proficiency Level(I)	Proficiency Level(J)	Mean Difference (I-J)	Std. Error	*p*
Teacher guidance	Bonferroni	B level	C level	.134	.126	.86
			D level	-.120	.117	.91
		C level	B level	-.134	.126	.86
			D level	-.255	.108	.06
		D level	B level	.120	.117	.91
			C level	.255	.108	.06
Teacher assistance	Bonferroni	B level	C level	-.067	.101	1.00
			D level	-.251*	.094	.02
		C level	B level	.067	.101	1.00
			D level	-.184	.087	.11
		D level	B level	.251*	.094	.02
			C level	.184	.087	.11
Teacher presence	Bonferroni	B level	C level	-.076	.162	1.00
			D level	-.232	.150	.37
		C level	B level	.076	.162	1.00
			D level	-.156	.139	.79
		D level	B level	.232	.150	.37
			C level	.156	.139	.79

In Table 4.29 the means and standard deviations of the dependent variables for the three proficiency levels are given. This table also shows that there is difference between B level and D level students with respect to teacher assistance dimension (See Table 4.29).

Table 4.29 The means and standard deviations of the perceived dimensions of teacher's role subscale in ECALLQ with respect to proficiency level

Dimensions of teacher's role subscale	Proficiency Level	M	SD
Teacher guidance	B level	3.23	.86
	C level	3.10	.80
	D level	3.35	.79
Teacher assistance	B level	3.70	.65
	C level	3.77	.71
	D level	3.95	.62
Teacher presence	B level	2.77	1.02
	C level	2.85	1.02
	D level	3.00	1.07

4.5.2.3 MANOVA for students' expectations from the teacher subscale with respect to proficiency level

A one-way multivariate analysis of variance was run to determine the effects of grade level (B, C and D) on the two dimensions of students' expectations from the teacher subscale in ECALLQ. The results of MANOVA are presented in Table 4.30.

Table 4.30 The results of multivariate test for the overall effect of proficiency level on the perceived dimensions of students' expectations from the teacher subscale in ECALLQ

Effect		Value	F	Hypot Df	Error Df	*p*	η^2
Level	Pillai's Trace	.040	3.07	4.00	608.00	.016*	.020

*Significant at the .05 level

This analysis showed that proficiency level had an overall significant effect on the perceived dimensions of students' expectations from the teacher in ECALLQ [Pillai's trace= .040, F (4, 608) = 3.07, $p < .05$, $\eta^2 = .020$] (See Table 4.30).

In order to investigate the effect of proficiency level on each variable analysis of variance was performed as a follow-up test to MANOVA (See Table 4.31). ANOVA indicated that there was a significant effect of proficiency level on both dimensions: lab activities guided by the teacher [F (2, 304) = 5.13 $p < .05$, $\eta^2 = .033$] overall guidance [F (2, 304) = 3.51 $p < .05$, $\eta^2 = .023$].

Table 4.31 Univariate F test computed for the two dimensions of students' expectations from the teacher' role subscale in ECALLQ with respect to proficiency level

	Dimensions of students' expectations subscale	df	F	*p*	η^2
PROFICIENCY LEVEL	Lab activities guided	2	5.13	.006*	.023
	Overall guidance	2	3.51	.031*	.023

*Significant at the .05 level

Post hoc analysis was employed to univariate ANOVA with Bonferonni test for the three dimensions of students' expectations on teacher's role subscale in ECALLQ. According to the results, a significant mean difference was observed between B and D level students in terms of lab activities guided by the teacher. Moreover, a significant mean difference was found between D level and C level students in terms of overall guidance dimension (See Table 4.32).

Table 4.32 The mean differences among the dimensions of students' expectations from the teacher subscale in ECALLQ with respect to proficiency level

Dependent Variable		Proficiency Level(I)	Proficiency Level(J)	Mean Difference (I-J)	Std. Error	*p*
Lab activities guided	Bonferroni	B level	C level	-.012	.134	1.00
			D level	-.324*	.124	.03
		C level	B level	.012	.134	1.00
			D level	-.312*	.115	.02
		D level	B level	.324*	.124	.03
			C level	.312*	.115	.02
Overall guidance	Bonferroni	B level	C level	.105	.128	1.00
			D level	-.180	.119	.40
		C level	B level	-.105	.128	1.00
			D level	-.285*	.110	.03
		D level	B level	.180	.119	.40
			C level	.285*	.110	.03

In Table 4.33, the means and standard deviations of the dependent variables for the three proficiency levels are shown. According to the means of the dimensions presented, D level students are much more concerned with lab activities guided by the teacher as compared with B and C level students. Moreover, there is a significant mean difference between C and D level students regarding overall guidance.

Table 4.33 The means and standard deviations of the dimensions of students' expectations from the teacher subscale in ECALLQ with respect to proficiency level

Dimensions of students' expectations on teacher's role	Proficiency Level	M	SD
Lab activities guided	B level	3.52	.91
	C level	3.54	.94
	D level	3.85	.78
Overall guidance	B level	3.14	.80
	C level	3.03	.90
	D level	3.32	.78

4.5.3 Mother-Father Education Level

4.5.3.1 MANOVA for computer's role subscale in ECALLQ with respect to mother-father education level

A two-way MANOVA was run to see if there was a significant mean difference among the perceived dimensions of computer's role subscale in ECALLQ with respect to mother education level, father education level and the interaction between mother and father education (See Table 4.34). This analysis indicated that there was no significant effect of mother education [Pillai's trace = .014, F (6, 554) = .66, p> .05, η^2= .007], father education [Pillai's trace = .020, F (6, 554) = .91, p> .05, η^2= .010] and mother-father education [Pillai's trace = .037, F (12, 834) = .86, p> .05, η^2= .012] on the perceived dimensions of computer's role subscale in ECALLQ (See Table 4.34).

Table 4.34 The results of Multivariate test for the effect of mother and father education level on the perceived dimensions of computer's role subscale in ECALLQ

Effect		Value	F	Hypot Df	Error Df	*p*	η^2
Mother education	Pillai's Trace	.014	.66	6	554	.68	.007
Father education	Pillai's Trace	.020	.91	6	554	.49	.010
Mother education Father education	Pillai's Trace	.037	.86	12	834	.59	.012

*Significant at the .05 level

Analysis of variance (ANOVA) on each dependent variable was performed as a follow-up test to MANOVA. The univariate tests failed to reveal a significant effect of mother and father education level on the dimensions of computer's role subscale. (See Table 4. 35).

Table 4.35 Univariate F test computed for the three dimensions of computer's role subscale in ECALLQ with respect to mother and father education level and interaction between the two variables

	Dimensions of computer's role	df	F	*p*	η^2
Mother education	Overall Effect of Computer	2	.310	.734	.002
	Language Skills	2	.974 .712	.379	.007
	Motivation	2		.492	.005
Father education	Overall Effect of Computer	2	1.079	.341	.008
	Language Skills	2	2.183	.115	.015
	Motivation	2	.916	.401	.007
Mother education	Overall Effect of Computer	4	.920	.453	.013
*Father education	Language Skills	4	1.282	.277	.018
	Motivation	4	.438	.781	.006

*Significant at .05 level

The means and standard deviations of mother and father education are shown in Table 4.36.

Table 4.36 The means and standard deviations of the dimensions of computer's role subscale in ECALLQ with respect to mother and father education level

Dimensions of computer's role	Mother Education	Father Education	M	SD
Overall effect of computer	Elementary/Middle School	Elementary/Middle School	3.12	.706
		High School	3.15	.668
		University and above	3.02	.762
	High School	Elementary/Middle School	3.11	.727
		High School	3.28	.828
		University and above	2.95	1.008
	University and above	Elementary/Middle School	2.12	.
		High School	3.19	1.089
		University and above	3.33	.917
Language skills	Elementary/Middle School	Elementary/Middle School	3.66	.576
		High School	3.68	.671
		University and above	3.56	.811
	High School	Elementary/Middle School	3.59	.770
		High School	3.53	.836
		University and above	3.51	1.000
	University and above	Elementary/Middle School	2.25	.
		High School	3.96	.504
		University and above	3.70	.880
Motivation	Elementary/Middle School	Elementary/Middle School	2.47	.833
		High School	2.69	.806
		University and above	2.48	.838
	High School	Elementary/Middle School	2.82	.549
		High School	2.72	.932
		University and above	2.58	1.087
	University and above	Elementary/Middle School	2.00	.
		High School	2.93	.765
		University and above	2.70	.700

4.5.3.2 MANOVA for teacher's role subscale in ECALLQ with respect to mother-father education level

A two-way MANOVA was conducted to see if there were any significant mean differences among the perceived dimensions of teacher's role subscale of ECALLQ with respect to mother education level, father education level and the interaction between

mother and father education (See Table 4.37). This analysis indicated that there was no significant effect of mother education [Pillai's trace = .018, *F* (6, 554) = .860, p> .05, η^2= .009], father education [Pillai's trace = .004, *F* (6, 554) = .180, p> .05, η^2= .002] and mother-father education [Pillai's trace = .067, *F* (12, 834) = 1.580, p> .05, η^2= .022] on the perceived dimensions of teacher's role subscale in ECALLQ.

Table 4.37 The results of Multivariate test for the effect of father and mother education level on the perceived dimensions of teacher's role subscale in ECALLQ

Effect		Value	F	Hypot Df	Error Df	*p*	η^2
Mother education	Pillai's Trace	.018	.86	6	554	.52	.009
Father education	Pillai's Trace	.004	.18	6	554	.98	.002
Mother education Father education	Pillai's Trace	.067	1.58	12	834	.09	.022

*Significant at the .05 level

Analysis of variance (ANOVA) on each dependent variable was performed as a follow-up test to MANOVA. The univariate tests failed to reveal a significant effect of mother and father education level on each of the dimensions of teacher's role subscale. However, the test revealed a significant effect of mother-father education (interaction between the two variables) on the teacher assistance dimension (See Table 4.38).

Table 4.38 Univariate F test computed for the three dimensions of teacher's role subscale in ECALLQ with respect to mother and father education level and interaction between the two variables

	Dimensions of teacher's role	df	F	*p*	η^2
Mother education	Teacher guidance	2	.545	.580	.004
	Teacher assistance	2	2.211	.111	.016
	Teacher presence	2	.085	.919	.001
Father education	Teacher guidance	2	.344	.709	.002
	Teacher assistance	2	.347	.707	.002
	Teacher presence	2	.041	.959	.000
Mother education	Teacher guidance	4	.740	.566	.011
*Father education	Teacher assistance	4	3.040	.018*	.042
	Teacher presence	4	1.216	.304	.017

*Significant at .05 level

Post hoc analysis was employed to univariate ANOVA with Bonferonni test for the three dimensions of teacher's role subscale and to investigate any possible significant mean differences among the students' mother and father education levels with respect to the dimensions of teacher's role subscale. According to the results no significant mean difference was observed among education levels of the mothers given the perceived dimensions of teacher's role subscale (See Table 4.39).

Table 4.39 The mean differences among the perceived dimensions of teacher's role in ECALLQ with respect to mother education level

Dependent Variable	(I) Mother Education	(J) mother education	mean difference (I-J)	*p*
Teacher guidance	Elementary/Middle School	High School	.072	1.00
		University and above	.040	1.00
	High School	Elementary/Middle School	-.072	1.00
		University and above	-.032	1.00
	University and above	Elementary/Middle School	-.040	1.00
		High School	.032	1.00
Teacher assistance	Elementary/Middle School	High School	.125	.53
		University and above	.317	.11
	High School	Elementary/Middle School	-.125	.53
		University and above	.192	.74
	University and above	Elementary/Middle School	-.317	.11
		High School	-.192	.74
Teacher presence	Elementary/Middle School	High School	-.014	1.00
		University and above	-.030	1.00
	High School	Elementary/Middle School	.014	1.00
		University and above	-.015	1.00
	University and above	Elementary/Middle School	.030	1.00
		High School	.015	1.00

*Significant at the .05 level

The means and standard deviations of mother and father education are shown in Table 4.40.

Table 4.40 The means and standard deviations of the dimensions of teacher's role subscale in ECALLQ with respect to mother and father education level

Dimensions of teacher's role	Mother Education	Father Education	M	SD
Teacher guidance	Elementary/Middle School	Elementary/Middle School	3.25	.706
		High School	3.20	.668
		University and above	3.34	.762
	High School	Elementary/Middle School	2.93	.727
		High School	3.27	.828
		University and above	3.18	1.008
	University and above	Elementary/Middle School	3.20	.
		High School	3.50	1.089
		University and above	3.08	.917
Teacher assistance	Elementary/Middle School	Elementary/Middle School	3.91	.576
		High School	3.84	.671
		University and above	3.86	.811
	High School	Elementary/Middle School	3.20	.770
		High School	3.86	.836
		University and above	3.94	1.000
	University and above	Elementary/Middle School	3.71	.
		High School	3.74	.504
		University and above	3.48	.880
Teacher presence	Elementary/Middle School	Elementary/Middle School	2.90	.833
		High School	2.89	.806
		University and above	2.78	.838
	High School	Elementary/Middle School	2.69	.549
		High School	2.74	.932
		University and above	3.25	1.087
	University and above	Elementary/Middle School	3.00	.
		High School	3.27	.765
		University and above	2.74	.700

4.5.3.3 MANOVA for the students' expectations from the teacher subscale in ECALLQ with respect to mother-father education level

A two-way MANOVA was run to see if there were any significant mean differences among the perceived dimensions of students' expectations from the teacher

subscale in ECALLQ with respect to mother education level, father education level and the interaction between mother and father education (See Table 4.41). This analysis indicated that there was no significant effect of mother education [Pillai's trace =.023, *F* (4, 554) = 1.600, p> .05, η^2= .011], father education [Pillai's trace =.002, *F* (4, 554) = .122, p> .05, η^2= .001] and mother-father education [Pillai's trace =. 034, *F* (8, 554) = 1.212, p> .05, η^2= .017] on the perceived dimension of students' expectations from the teacher subscale in ECALLQ.

Table 4.41 The results of Multivariate test for the effect of father and mother education level on the perceived dimensions of the students' expectations from the teacher subscale in ECALLQ

Effect		Value	F	Hypot Df	Error Df	*p*	η^2
Mother education	Pillai's Trace	.023	1.60	4	554	.17	.011
Father education	Pillai's Trace	.002	.12	4	554	.97	.001
Mother education Father education	Pillai's Trace	.034	1.21	8	834	.29	.017

*Significant at the .05 level

Analysis of variance (ANOVA) on each dependent variable was performed as a follow-up test to MANOVA. The univariate tests failed to reveal a significant effect on each of the dimensions. That is to say, the test failed to reveal a significant effect of mother and father education level on the dimensions of the students' expectations from the teacher subscale (See Table 4.42).

Table 4.42 Univariate F test computed for the two dimensions of the students' expectations from the teacher subscale in ECALLQ with respect to mother and father education level and interaction between the two variables

	Dimensions of students' expectations on teacher's role	df	F	*p*	η^2
Mother education	Lab activities guided	2	2.833	.061	.020
	Overall guidance	2	.414	.661	.003
Father education	Lab activities guided	2	.030	.971	.000
	Overall guidance	2	.196	.822	.001
Mother education	Lab activities guided	4	.715	.582	.010
*Father education	Overall guidance	4	1.210	.307	.017

*Significant at .05 level

The means and standard deviations of mother and father education are shown in Table 4.43.

Table 4.43 The means and standard deviations of the dimensions of the students' expectations from the teacher subscale in ECALLQ with respect to mother and father education level

Dimensions of students' expectations	Mother Education	Father Education	M	SD
Lab activities guided	Elementary/Middle School	Elementary/Middle School	3.82	.804
		High School	3.61	.842
		University and above	3.88	.739
	High School	Elementary/Middle School	3.50	.745
		High School	3.69	.847
		University and above	3.57	1.088
	University and above	Elementary/Middle School	3.00	.
		High School	3.25	.947
		University and above	3.06	.888
Overall guidance	Elementary/Middle School	Elementary/Middle School	3.27	.823
		High School	3.15	.808
		University and above	3.12	.840
	High School	Elementary/Middle School	3.14	.686
		High School	3.05	.985
		University and above	3.40	.742
	University and above	Elementary/Middle School	2.75	.
		High School	3.29	.430
		University and above	2.67	.886

4.5.4 Experience of a computer-assisted course

4.5.4.1 MANOVA for computer's role subscale in ECALLQ with respect to computer-assisted course experience

A one-way multivariate analysis of variance was performed to find out the effect of computer-assisted course experience on the three dimensions of computer's role subscale in ECALLQ. The results of MANOVA are presented in Table 4.44. The results indicated that the computer-assisted course experience had no significant effect on

overall perceived dimensions of ECALLQ. [Pillai's trace=.009, F (3, 302) = .89, p> .05, η^2 = .009].

Table 4.44 The results of multivariate test for the overall effect of computer course experience on the perceived dimensions of computer's role subscale in ECALLQ

Effect		Value	F	Hypot Df	Error Df	*p*	η^2
Computer Experience	Pillai's Trace	.009	.89	3.00	302.00	.44	.009

*Significant at the .05 level

Analysis of variance on each dependent variable was employed as a follow-up test to MANOVA (See Table 4.45). The univariate tests revealed that there was no significant effect of computer course experience on any of the dimensions of computer's role subscale. That is to say, the univariate test failed to find any significant effect of computer course experience on overall computer effect [F (1,304) = 1.248 p > .05, η^2 = .004], language skills [F (1,304) = .823 p > .05, η^2 = .003] and motivation [F (1,304) = 2.103 p > .05, η^2 = .007].

Table 4.45 Univariate F test computed for the perceived dimensions of computer's role subscale in ECALLQ with respect to experience of a computer-assisted course before

	Dimensions of computer's role subscale	df	F	*p*	η^2
Computer	Overall Effect of Computer	1	1.248	.265	.004
Course	Language Skills	1	.823	.365	.003
Experience	Motivation	1	2.103	.148	.007

*Significant at the .05 level

Finally, there was no significant difference among the means of each of the dimensions (See Table 4.46).

Table 4.46 The means and standard deviations of the perceived dimensions of computer's role subscale in ECALLQ with respect to computer course experience

Dimensions of computer's role subscale	Computer Course Experience	M	SD
Overall effect of computer	yes	3.02	.783
	no	3.14	.762
Language Skills	yes	3.56	.742
	no	3.65	.705
Motivation	yes	2.44	.870
	no	2.60	.820

4.5.4.2 MANOVA for teacher's role subscale in ECALLQ with respect to computer-assisted course experience

A one-way multivariate analysis of variance was performed to find out the effect of experience of a computer-assisted course on the three dimensions of teacher's role subscale in ECALLQ. The results of MANOVA indicated that computer-assisted course experience had no significant effect on overall perceived dimensions of ECALLQ. [Pillai's trace=.003, F (3, 302) = .26, p> .05, η^2 = .003]. The results are presented in Table 4.47

Table 4.47 The results of multivariate test for the overall effect of computer course experience on the perceived dimensions of teacher's role subscale in ECALLQ

Effect		Value	F	Hypot Df	Error Df	*p*	η^2
Computer Experience	Pillai's Trace	.003	.26	3.00	302.00	.85	.003

*Significant at the .05 level

Analysis of variance on each dependent variable was employed as a follow-up test to MANOVA (See Table 4.48). The univariate tests revealed that there was no significant effect of computer course experience on any of the dimensions of teacher's

role subscale in ECALLQ. In other words, the univariate test failed to find any significant effect of computer course experience on teacher guidance [F (1,304) = .312 p > .05, η^2 = .001], teacher assistance [F (1,304) = .642 p > .05, η^2 = .002] and teacher presence [F (1,304) = .838 p > .05, η^2 = .000].

Table 4.48 Univariate F test computed for the perceived dimensions of teacher's role subscale in ECALLQ with respect to experience of a computer-assisted course before

	Dimensions of teacher's role subscale	df	F	*p*	η^2
Computer	Teacher guidance	1	.312	.577	.001
Course	Teacher assistance	1	.642	.424	.002
Experience	Teacher presence	1	.042	.838	.000

*Significant at the .05 level

Finally, the mean and standard deviations for each dimension was observed and it was found that there was no significant difference among the means of each of the dimensions (See Table 4.49).

Table 4.49 The means and standard deviations of the perceived dimensions of teacher's role subscale in ECALLQ with respect to computer course experience

Dimensions of teacher's role subscale	Comp Course Experience	M	SD
Teacher guidance	yes	3.29	.783
	no	3.23	.762
Teacher assistance	yes	3.89	.742
	no	3.82	.705
Teacher presence	yes	2.88	.870
	no	2.91	.820

4.5.4.3 MANOVA for students' expectations from the teacher subscale in ECALLQ with respect to computer-assisted course experience

A one-way multivariate analysis of variance was performed to find out the effects of experience of a computer-assisted course on the two dimensions of students' expectations from the teacher subscale in ECALLQ. The results of MANOVA indicated that computer-assisted course experience had no significant effect on overall perceived

dimensions of students' expectations from the teacher subscale in ECALLQ. [Pillai's trace=.000, F (2, 302) = .040, p> .05, η^2 = .000].The results are shown in Table 4.50.

Table 4.50 The results of multivariate test for the overall effect of computer course experience on the two dimensions of students' expectations from the teacher subscale in ECALLQ

Effect			Value	F	Hypot Df	Error Df	*p*	η^2
Computer	Experience	Pillai's Trace	.000	.040	2.00	302.00	.96	.000

*Significant at the .05 level

Analysis of variance on each dependent variable was employed as a follow-up test to MANOVA (See Table 4.51). The univariate tests revealed that there was no significant effect of computer course experience on any of the dimensions of students' expectations from the teacher subscale in ECALLQ. That is to say, the univariate test failed to find any significant effect of computer course experience on lab activities guided [F (1,303) = .359 p > .05, η^2 = .000] and overall guidance [F (1,303) = .000 p > .05, η^2 = .000] (See Table 4.51).

Table 4.51 Univariate F test computed for the dimensions of students' expectations from the teacher subscale in ECALLQ with respect to experience of a computer-assisted course before

Dimensions of students' expectations subscale		df	F	*p*	η^2
Computer					
Course	Lab activities guided	1	.059	.808	.000
Experience	Overall guidance	1	.000	.994	.000

*Significant at the .05 level

Finally, the mean and standard deviations for each dimension was observed and given in Table 4.52 (See Table 4.52).

Table 4.52 The means and standard deviations of the perceived dimensions of students' expectations from the teacher subscale in ECALLQ with respect to computer course experience

Dimensions of students' expectations scale	Comp Course Experience	M	SD
Lab activities guided	yes	3.69	.902
	no	3.66	.870
Overall guidance	yes	3.18	.932
	no	3.18	.806

4.5.5 Using computer to study English in free time

4.5.5.1 MANOVA for the computer's role subscale with respect to using computer to study English in free time

A one-way multivariate analysis of variance was performed to find out the effect of using computer to study English in free time on the three dimensions of computer's role subscale in ECALLQ. The results of MANOVA are presented in Table 4.53. The results of one- way MANOVA indicated that using computer in free time had no significant effect on overall perceived dimensions of computer's role subscale in ECALLQ. [Pillai's trace=.012, F (3, 302) = 1.25, p> .05, η^2 = .012].

Table 4.53 The results of multivariate test for the overall effect of studying on computer in free time on the perceived dimensions of computer's role subscale in ECALLQ

Effect		Value	F	Hypot Df	Error Df	*p*	η^2
Studying on comp in free time	Pillai's Trace	.012	1 .25	3.00	302.00	.291	.012

*Significant at the .05 level

Analysis of variance on each dependent variable was employed as a follow-up test to MANOVA (See Table 4.54). The univariate tests revealed once again that there was no significant effect of studying on computer in free time on overall effect of computer [F (1,304) = 1.70 p > .05, η^2 = .006], language skills [F (1,304) = .54 p > .05, η^2 = .002], and motivation [F (1,304) = 3.08 p > .05, η^2 = .009]. The results are shown below in Table 4.54.

Table 4.54 Univariate F test computed for the three dimensions of computer's role subscale in ECALLQ with respect to studying on computer in free time

	Dimensions of computer's role subscale	df	F	*p*	η^2
Computer	Overall Effect of Computer	1	1.70	.193	.006
Course	Language Skills	1	.54	.464	.002
Experience	Motivation	1	3.08	.080	.009

*Significant at the .05 level

The means and standard deviations for each dimension are given in Table 4.55.

Table 4.55 The means and standard deviations of the perceived dimensions of computer's role subscale in ECALLQ with respect to studying on computer in free time

Dimensions of ECALLQ	Studying on comp in free time	M	SD
Overall effect of computer	yes	3.24	.855
	no	3.09	.754
Language Skills	yes	3.70	.836
	no	3.62	.690
Motivation	yes	2.74	.877
	no	2.52	.818

4.5.5.2 MANOVA for the teacher's role subscale with respect to using computer to study English in free time

A one-way multivariate analysis of variance was performed to find out the effect of using computer to study English in free time on the three dimensions of teacher's role subscale in ECALLQ. The results of MANOVA are presented in Table 4.56. The results of MANOVA indicated that using computer in free time had no significant effect on overall perceived dimensions of teacher's role subscale in ECALLQ. [Pillai's trace=.008, F (3, 302) = .769, p> .05, η^2 = .008].

Table 4.56 The results of multivariate test for the overall effect of studying on computer in free time on the perceived dimensions of computer's role subscale in ECALLQ

Effect		Value	F	Hypot Df	Error Df	*p*	η^2
Studying on comp. in free time	Pillai's Trace	.008	.769	3.00	302.00	.512	.008

*Significant at the .05 level

Analysis of variance on each dependent variable was employed as a follow-up test to MANOVA (See Table 4.57). The univariate tests revealed once again that there was no significant effect of studying on computer in free time on any of the dimensions of teacher's role subscale in ECALLQ. In other words, the univariate test failed to find any significant effect of studying on computer in free time on teacher guidance [F

(1,304) =.316 p > .05, η^2 = .001], teacher assistance [*F* (1,304) = .017 p > .05, η^2 = .000] and teacher presence [*F* (1,304) = 2.153 p > .05, η^2 = .007].

Table 4.57 Univariate F test computed for the three dimensions of teacher's role subscale in ECALLQ with respect to studying on computer in free time

	Dimensions of teacher's role subscale	df	F	*p*	η^2
Computer	Teacher guidance	1	.316	.574	.001
Course	Teacher assistance	1	.017	.895	.000
Experience	Teacher presence	1	2.153	.143	.007

*Significant at the .05 level

The means and standard deviations for each dimension are given in Table 4.58.

Table 4.58 The means and standard deviations of the perceived dimensions of teacher's role subscale in ECALLQ with respect to studying on computer in free time

Dimensions of teacher's role subscale	Studying on comp in free time	M	SD
Teacher guidance	yes	3.19	.912
	no	3.25	.800
Teacher assistance	yes	3.83	.567
	no	3.84	.683
Teacher presence	yes	2.71	1.039
	no	2.94	1.048

4.5.5.3 MANOVA for the students' expectations from the teacher subscale with respect to using computer to study English in free time

A one-way multivariate analysis of variance was performed to find out the effect of using computer to study English in free time on the dimensions of students' expectations from the teacher subscale. The results of MANOVA indicated that using computer in free time had no significant effect on overall perceived dimensions of students' expectations from the teacher subscale [Pillai's trace=.007, *F* (2, 302) = 1.027, p> .05, η^2 = .007].

Table 4.59 The results of multivariate test for the overall effect of studying on computer in free time on perceived dimensions of students' expectations subscale in ECALLQ

Effect		Value	F	Hypot Df	Error Df	*p*	η^2
Studying on comp.in free time	Pillai's Trace	.007	1.027	2.00	302.00	.359	.007

*Significant at the .05 level

Analysis of variance on each dependent variable was employed as a follow-up test to MANOVA (See Table 4.60). The univariate tests revealed that there was no significant effect of studying on computer in free time on any of the dimensions of students' expectations from the teacher subscale in ECALLQ. In other words, the univariate test failed to find any significant effect of studying on computer in free time on lab activities guided [F (1,303) =.059 p > .05, η^2 = .000] and overall guidance [F (1,303) = 1.214 p > .05, η^2 = .004].

Table 4.60 Univariate F test computed for the three dimensions of students' expectations subscale in ECALLQ with respect to studying on computer in free time

	Dimensions of students' expectation	df	F	*p*	η^2
Studying on computer in free time	Lab activities guided	1	.059	.808	.000
	Overall guidance	1	1.214	.271	.004

*Significant at the .05 level

The mean and standard deviations for each dimension was observed, and it was found that the students who do not study English on computer in their free time needed overall guidance more than the students who study English on computer in their free time (See Table 4.61).

Table 4.61 The means and standard deviations of the perceived dimensions of students' expectations from the teacher subscale in ECALLQ with respect to studying on computer in free time

Dimensions of ECALLQ	Studying on comp in free time	M	SD
Lab activities guided	yes	3.70	.974
	no	3.67	.855
Overall guidance	yes	3.07	.868
	no	3.21	.828

4.6 Students' and teachers' perceptions of computer's role in CALL environment

In interpreting the means of the Likert scale items, the following scale was used (See Figure 4.2).

Figure 4.2 Rating scale for interpreting likert-scale responses

Mean	Degree	Opinion
4.5-5	Very High	Strongly agree
3.5-4.4	High	Agree
2.5-3.4	Moderate	Undecided
1.5-2.4	Low	Disagree
1.1-1.4	Very low	Strongly disagree

Moreover, there were some negative questions both on students' and teachers' questionnaires. Therefore, the scoring system was reversed for these questions. In order to emphasize negative orientation for these questions, the symbol $^{+}$has been placed on the right upper side of the questions, and the following scale has been used during the data analysis of these negative questions:

Figure 4.3 Reversed rating scale for interpreting negatively-oriented Likert-scale responses

Mean	Degree	Opinion
4.5-5	Very low	Strongly Disagree
3.5-4.4	Low	Disagree
2.5-3.4	Moderate	Undecided
1.5-2.4	High	Agree
1.1-1.4	Very high	Strongly agree

Research question six was "What are the teachers' and students' perceptions of the computer's role in CALL environment?" Table 4.62 shows the related items which are present in both students' and teachers' questionnaire and the means and standard deviations are presented as well in Table 4.62.

Table 4.62 Students' and teachers' perceptions of computer's role in CALL environment

Common Items of Computer's Role Subscale for students and teachers			Student		Teacher	
Item no						
S	T		M	SD	M	SD
13	5	Lack of interaction while studying on the computer de-motivates students	2.73+	1.260+	2.34+	1.109+
4	9	Computer is effective in teaching students new language points	3.20	1.159	3.64	.984
9	10	The vocabulary activities in the computer are effective in teaching students English	3.92	.924	4.02	.820
10	11	The grammar activities in the computer are effective in teaching students English	3.88	.961	4.24	.555
6	12	The reading activities in the computer are effective in teaching students English	3.54	1.049	3.90	.886
7	13	The writing activities in the computer are effective in teaching students English	3.44	1.175	3.56	1.072
8	14	The pronunciation activities in the computer are effective in teaching students English	3.73	1.139	4.18	.660
5	15	The listening activities in the computer are effective in teaching students English	3.92	.933	4.34	.592
11	16	The speaking activities in the computer are effective in teaching students English	3.12	1.314	2.60	1.261
12	17	The dictionaries in the computer are effective in teaching students English	3.59	1.118	4.24	.716
17	18	+Studying on the computer for 50 minutes without any break decreases students' motivation	2.13+	1.247+	1.46+	.838+
20	19	+Students are not always motivated while studying on the computer	2.83+	1.239+	1.62+	.901+

As it can be seen from Table 4.62 while students are undecided about "lack of interaction while studying on the computer de-motivates students" teachers agree on it. Similarly while students are undecided about "computer is effective in teaching students new language points", "the writing activities in the computer are effective in teaching students English", "the speaking activities in the computer are effective in teaching students English" and "students are not always motivated while studying on the computer" teachers agree on these statements.

Furthermore, additional questions were asked only to the teachers about the role of computers. Table 4.63 presents the means and standard deviations of these items.

Table 4.63 Teachers' perceptions of computer's role

	Computer's role subscale in teacher's questionnaire	M	SD
1	[+]Computer lab is inferior to traditional methods of teaching in presenting a subject	3.36[+]	1.074[+]
2	[+]Computer is not effective in correcting students' errors	3.62[+]	1.047[+]
3	[+]Computer restricts social interaction which is required in language learning	2.62[+]	1.047[+]
4	[+]Computers do not lead to meaningful learning	3.96[+]	.727[+]
6	Computer is competent in leading effective language learning	3.40	.931
7	[+]Computer does not facilitate social organization of learning	2.56[+]	.836[+]
8	Computer increases student achievement	3.82	.719
20	Computer is necessary for students' language education	4.06	.867

Given the results in Table 4.63, teachers disagree that "computer is not effective in correcting students' errors" and they also think that computers lead to meaningful learning. Moreover, teachers think that computer increases students' achievement and the computer is necessary for students' language education. Finally, they are undecided about all the other items left. For item three, some teachers may think some of the students have the ability to work with their peers in the computer laboratory while other teachers think the students donot in fact construct a social organization in the CALL environment. Lastly,the overall mean of this scale is 3.38 which shows that teachers are undecided about the effectiveness of computer in language learning.

Further suggestions which were revealed in open-ended questions were made by both students and teachers on the use of CALL in the institution. Both the students and the teachers think that the duration of lab lesson is too much and de-motivating. This finding supports item 17 in students' questionnaire and item 18 in teacher's questionnaire. Additionally, both students and teachers suggest that the administrators should decrease the number of lab lessons and provide smaller classes for the benefit of teacher to be able to deal with each student efficiently. Moreover, students and teachers in general think that administrators should provide a variety of games and chat programs. Lastly, teachers think that the computer improves all skills in English (See Appendices: D, E, F, G).

4.7 Students' and teachers' perceptions of the teacher's role in CALL environment

Research question thirteen was "What are the teachers' and students' perceptions of the teacher's role in CALL environment?" The related items are present in both teachers' questionnaire and students' questionnaire and their means and standard deviations are presented in Table 4.64.

Table 4.64 Students' and teachers' perceptions of the teacher's role in CALL environment

Common Items of Teacher's Role Subscale for students and teachers			Student		Teacher	
Item no			M	SD	M	SD
S	T					
1	1	Students learn better when the teacher deals with them in person in the laboratory	3.83	1.089	4.38	.635
2	2	Teacher explains the students' mistakes better than the computer	4.12	1.046	4.04	.856
3	4	Teacher's explaining the unknown words in lab courses facilitates students' learning	4.08	.975	3.78	.790
4	5	Nobody completes the online activities when the teacher is not present in the lab	2.83	1.354	3.54	1.146
5	6	Students can not concentrate on the lesson when there is no teacher inspection in the lab	2.52	1.289	4.00	.903
6	7	Students can write essays, letters etc. more easily under teacher's guidance in lab courses	3.61	1.191	4.18	.719
7	8	Students comprehend the texts better when they read under teacher's guidance in lab courses	3.18	1.251	3.54	1.034
8	9	Students continue their studies comfortably when the teacher helps them with the problematic questions in lab courses	4.17	.864	4.34	.557
9	10	Students study more enthusiastically when the teacher is in the lab	2.90	1.655	3.72	.757
11	12	Students compensate for their language deficiencies better with teacher's help in lab courses	3.85	1.012	4.14	.535
12	13	Teacher guides the students in LAB in such a way that they can easily adjust their learning styles to computer use	3.07	1.183	3.46	.838
14	14	Teacher's giving feedback to the students makes them study more efficient in the lab	3.63	1.094	4.04	.755
10	16	Teacher's telling the students what activities they should do	2.89	1.289	3.80	.756

As can be seen from Table 4.64 while students are undecided about "nobody completes the online activities when the teacher is not present in the lab", "students can not concentrate on the lesson when there is no teacher inspection in the lab, "students comprehend the texts better when they read under teacher's guidance in lab courses", "students study more enthusiastically when the teacher is in the lab", "teacher guides the students in LAB in such a way that they can easily adjust their learning styles to computer

use" and "teacher's telling the students what activities they should do increases their achievement" teachers agree on these statements. On the other hand, teachers and students agree on all other items.

Furthermore, three different items concerning teacher's role in CALL were adressed to the teachers. The first item is "My guidance on students' studies increases their achievement in the lab". The teachers agreed on this item. The second item is "even if I do not check what the students are doing in lab courses they continue working enthusiastically". This is a negatively oriented question, and the teachers disagreed on this item .The last item is "teacher's assistance in the lab increases students' achievement". Teachers thought that teacher assistance in the lab increased students' achievement.

Besides suggestions revealed in open-ended questions were made by both students and teachers on the role of teachers in the institution. Both students and teachers think that teachers should monitor students' progress and they should guide the students where necessary. Moreover, some statements related to the presences of the teacher in the laboratories were that teachers should not wander in the class too much and they should not be repressive to the students. Lastly, according to both teachers and students, teachers should come up with different activities to the lab lessons, which are expected to be both educative and enjoyable (See Appendices: D, E, F, G).

4.8 Summary of the results

In this chapter the results of the study were presented in ten sections. In the first section the results of the principal component analysis were given. According to the results the students perceived the dimensions in ECALLQ as overall computer effect,

language skills and motivation for computer's role subscale; teacher guidance, teacher assistance and teacher presence for teacher's role subscale; overall guidance and lab activities guided by the teacher for students' expectations from the teacher subscale.

In the second section the results of repeated measures ANOVA for computer's role were given. According to the results students perceived the language skills dimension as the most effective among the other dimensions that were overall effect of computer and motivation respectively.

In the third section the results of repeated measure ANOVA for teacher's role were presented. The results implied that students perceived the teacher assistance dimension as the most effective. Other dimensions were teacher guidance and teacher presence respectively.

In the fourth section the results of paired-samples t-test were given. According to the results lab activities guided by the teacher were given the most importance by the students.

In the fifth section the results of MANOVA were touched upon. The results indicated that proficiency level had a significant overall effect on the perceived dimensions of ECALL. Moreover, proficiency level significantly affected the teacher assistance dimension of the teacher's role subscale. Proficiency level also affected lab activities guided and overall guidance dimensions in students' expectations from the teacher subscale. D level students gave more importance to the lab activities guided by the teachers and overall guidance in the laboratory than B and C level students. On the other hand, neither mother education level nor father education level of the students had a significant effect on the perceived dimensions of ECALL. Lastly, interaction of

mother-father education level was found to have a significant effect on the teacher assistance dimension of the teacher's role subscale.

In the sixth section the results of descriptive statistics on the perceptions of both students and teachers regarding computer's role were presented.

In the seventh section the results of descriptive statistics on the perceptions of both students and teachers regarding teacher's role were presented. Firstly, mean of all mean values concerning students' perceptions of teacher's role was given. Next, mean of all mean values concerning teachers' perceptions of their role was presented. According to the results both students and teachers agreed on the teacher's effectiveness in CALL.

In section eight a comparison between students' and teachers' perceptions of computer's role was made by examining the same questions in the two subscales. These two groups sometimes agreed with each other and they sometimes disagree with each other. What is more, some additional questions were asked to the teachers about computer's role. The findings obtained from these items additional were also presented in this section.

In section nine a comparison between students' and teachers' perceptions of teacher's role was made by examining the same questions in the two subscales. These two groups sometimes agreed with each other and they sometimes disagree with each other. What is more, some additional questions were asked to the teachers about their role. The findings obtained from these items were also presented in this section.

The next chapter will present the discussion, conclusion and implications.

CHAPTER 5

DISCUSSION, CONCLUSION AND IMPLICATIONS

This chapter presents the discussion of the findings related to the relevant literature, conclusions drawn from those findings, implications and suggestions for practice and future research.

5.1 Discussion of the results

5.1.1 The perceived dimensions of effective CALL

The first aim of this study was to find out the perceived dimensions of effective CALL according to the perceptions of the university preparatory school students. Effective CALL was mainly investigated under three subtitles in this study. These subscales were computer's role, teacher's role and students' expectations from the teacher. Data obtained from the students revealed that students perceived computer's role with respect to (1) overall effect of the computer, (2) language skills and (3) motivation. The second subscale was teacher's role. Data obtained from the students revealed that preparatory school students perceived teacher's role with respect to teacher (1) guidance, (2) assistance and (3) presence. The third subscale was students' expectations from the teacher. Data obtained from the students revealed that students perceived their expectations with respect to (1) activities guided by the teacher and (2) overall guidance. That is to say, the examination of the rotated factor solutions showed that the perceived dimensions of each subscale in this study is meaningful in terms of content. Furthermore, researchers such as Bingöl (2003), Healey (1999), Lasagabaster

and Sierra (2003), Okan (2003) and Scholfield and Ypsilodis (1994) found language skills, overall effect of computer and teacher guidance.

5.1.2 The priorities of students on the perceived dimensions of computer's role

One of the purposes of this study was to identify the dimension of computer's role which was given the most importance by university preparatory school students. The results of repeated measures ANOVA indicated significant mean differences among the dimensions. The results of pair-wise comparisons and mean differences showed that students perceived the language skills dimension as the most important, which was congruent with the study of Jones and Fortescue (1987) and Stracke-Elbina (1998). Language skills dimension included the items "The listening activities on the computer are effective in my learning English"; "The reading activities are effective in my learning English"; "The writing activities are effective in my learning English"; "The pronunciation activities are effective in my learning English"; "The vocabulary activities are effective in my learning English"; "The speaking activities are effective in my learning English"; "The grammar activities are effective in my learning English"; "The dictionaries in the computer are effective in my learning English" which were also cited as being effective in CALL in the literature (AbuSeilek, 2007; Bingöl, 2003; Healey, 1999; Levy, 2006, cited in Donaldson & Haggstrom, 2006; Önsoy, 2004).

5.1.3 The priorities of students on the perceived dimensions of teacher's role

Another purpose of this was to identify which dimension of teacher's role in CALL was given the most importance. The results of repeated measures ANOVA showed significant mean differences among the dimensions in teacher's role subscale. The results of the pair-wise comparisons and mean differences showed that students perceived the

teacher assistance dimension as the most important. Teacher assistance dimension included the items “With teacher assistance I compensate for my language deficiencies better”; “Teacher assistance helps me to continue with my studies comfortably”; “Teacher explains my mistakes better than the computer”; “I comprehend the texts better when I read under teacher’s guidance in lab courses”; “Teacher’s dealing with me in person makes me learn better”; “Teacher assistance makes me do the writing sections more easily”; “Teacher’s explaining the unknown words in lab courses facilitates my learning”. The students were undecided about teacher guidance and teacher presence dimensions in general while they agree on the importance of having teacher assistance in the lab. According to the researcher’s own observations the reason behind this is that as Hubbard (Taylor & Gitsaki, 2000, cited in Fotos & Browne, 2004) mentioned students are expected to take a considerable amount of responsibility for their own learning at the beginning. This leads to failure, so they just want to obtain handy information from the teacher. According to them teacher guidance is just a workload. Moreover, there may be some management problems in the lab sessions. As it was mentioned in the answers for open-ended questions of students, the laboratories’ being to large and crowded can be a burden on teacher management. Moreover the teacher may be intolerant in such environments where s/he has to deal with too many students at a time. That’s why, according to the students, there are some problems related to teacher presence in the laboratory. These may be management problems resulting from crowded CALL classes.

5.1.4 The priorities of students on the perceived dimensions of students' expectations from the teacher

The third subscale which is students' expectations from the teacher aimed to identify the most important dimension of the two dimensions found. As the results of the paired samples t-test indicated the students perceived the lab activities guided by the teacher dimension as the most important. This dimension included the items "I get more interested in lab lessons if my teacher awards the ones who get the highest scores from common activities"; "I learn more easily if my teacher makes us do enjoyable and educational exercises in group"; "I learn better if my teacher makes us do pronunciation activities"; "Teachers' making us study in groups makes me study better while increasing rivalry among the students". This finding is linear with Dercke, Smith and Hemery (1995, cited in Beatty, 2003, p.104), Stracke-Elbina (1998) and Hamm's (1992, cited in Beatty, 2003, p. 106) findings.

5.1.5 The differences in the perceived dimensions of effective CALL with respect to certain background variables of the students

One of the goals of this study was to investigate whether there were significant differences in the dimensions of effective CALL context with respect to certain background variables of students. With this purpose in mind a number of MANOVAs were conducted.

The results indicated that gender had no significant effect on the perceived dimensions of computer's role subscale. This finding is consistent with Akbulut's (2008) study. However, according to Okan's study (2003) there is a decrease in the motivation of female students and the reason for this is that the main characters in the online texts

were males. Since the computer program studied at Zonguldak Karaelmas University includes both male and female characters there was not a significant difference in students' perceptions of computer's role with respect to gender. Similarly, gender had no significant effect on the perceived dimensions of teacher's role in this study.

Moreover, gender had no significant effect on the perceived dimensions of students' expectations from the teacher. Female and male preparatory school students have the same expectations from the teachers in a CALL environment.

Another background variable, proficiency level, was investigated as well. It was found that proficiency level had an overall significant effect on the dimensions of computer's role subscale which is congruent with the literature (Önsoy, 2004). In Önsoy's study, B level students were found to have more positive attitude towards the overall effect of computers in language instruction than D level students. B level students have higher language ability than D level students. The study shows that B level students seem to profit most from using computers to learn language.

Proficiency level also had an overall effect on the perceived dimensions of teacher's role subscale. Furthermore, the results indicated that proficiency level had a significant effect on the teacher assistance dimension. A significant mean difference was observed between B and D level students according to the MANOVA results. The reason for this difference is B level students' being more proficient in the language than D level students. That is to say, B level students can cope with the problematic language points on their own and they do not need much teacher assistance.

Proficiency level had a significant effect on the perceived dimensions of students' expectations from the teacher subscale as well. The results indicated that there

were significant mean differences among each of the dimensions with respect to proficiency level. D level students gave much more importance to the lab activities guided by the teacher than B and C level students. Moreover, there was significant difference between the means of C and D level students with respect to overall guidance. This indicated that D level students expect much more regarding the overall guidance provided by the teacher than C level students.

Additionally, the study indicated that there was no significant effect of mother-father education level on the dimensions of the subscales in the effective CALL questionnaire. However, a significant effect of mother-father education level interaction was found on teacher assistance dimension. That is to say students whose parents are university graduates gave less importance to teacher assistance in CALL while students whose parents are elementary graduates gave more importance to teacher assistance in the laboratory. The reason for this can be that those students whose parents are university graduates may be more confident and deal with any problem in the laboratory on their own because those parents give guidance to their children at home.

Lastly, studying English on computer in free time and experience of computer-assisted course showed no significant effect on the dimensions of subscales in ECALLQ.

5.1.6 Students' and teachers' perceptions of computer's role in CALL environment

Another purpose of this study was to investigate the differences and similarities between students' and teachers' perceptions. According to the findings, it seems that both students and the teachers thought that the listening activities in the computer were effective in language learning. This finding is consistent with the literature (Abuseilek, 2007; Kılıçkaya, 2005). The vocabulary, grammar, pronunciation and reading activities

and the dictionaries loaded in the computer were regarded as being effective in language learning as well. However, the findings in Lasagabaster and Sierra's (2003) study indicated that CALL was not effective in promoting reading skills of the students. For this section, both students and teachers agreed that studying on the computer for 50 minutes without any break decreases students' motivation. This finding contradicted with Akbulut's (2008) study in which students were reported as being motivated via computers for learning English.

On the other hand, teachers agreed that "lack of interaction while studying on the computer de-motivates students" and "computer is effective in teaching students new language points". However, students were undecided about these items. The reason why students were undecided about lack of interaction's de-motivating them can be the result of their "having no common sense of studying in an organized way" (Kulik, 2003). Moreover, this finding is incongruent with Lagasabaster and Sierra's (2003) study in which they stated that lack of interaction is an important burden for students' learning.

Additional questions were asked to teachers to learn their perceptions of some other issues concerning computer's role in language learning. According to the findings teachers think that computer is effective in correcting students' errors. Moreover, they think that computers can lead to meaningful learning. Lastly, the teachers agree that computer is necessary for students' language education. However they are undecided about the effectiveness of computer in learning English.

5.1.7 Students' and teachers' perceptions of teacher's role in CALL environment

According to the findings both teachers and students agreed that students learn better when the teachers deal with them in person. Furthermore, other items related to

teacher assistance were agreed by both teachers and students. For instance, both students and teachers thought that students compensate for their language deficiencies better with the teacher's help in the laboratory. Another finding indicated that teacher had superiority over computer as both students and teachers agreed that teacher explains the students' mistakes better than the computer.

While students are undecided about teacher's presence in the lab the teachers think that they should be in the lab to control students' studies. Moreover, students are undecided about whether they study more enthusiastically when the teacher is in the lab or not, while teachers agreed on this item. It can be said that students' indecisiveness can be the result of some management problems' occurrence although there is a teacher in the lab. Their being indecisive about teacher presence contradicts with their asking for assistance from the teacher. Therefore, this contradiction may be the result of some management problems. Lastly, students are undecided about teacher guidance while teachers agreed that teacher guidance is effective in learning English with computers. Students agreed that teacher guidance is effective only where writing activities are concerned. Lastly, both students and teachers think that teacher feedback makes students study more efficiently. This finding is linear with Pinkman's (2005) findings. According to Pinkman, students agreed that feedback from classmates and the teacher increased their motivation and interest towards learning.

Three more items were placed to the teachers' questionnaire. The first one was a general item, "My guidance increases students' achievement in the lab". The teachers agreed that their guidance increased the students' achievement in the lab. The other item was "Even if I do not check what the students are doing in lab courses they continue

working enthusiastically". The teachers did not agree on this item because they might have observed that some students did not do the exercises when the teacher did not check their progress. The third item was, "My assistance increases students' achievement in the lab" which the teachers agreed on.

5.2 Conclusions

One of the aims of this study was to reveal the dimensions of the effective computer-assisted language learning from the perspectives of the students and to find out which dimensions were given the most importance.

The results showed that students gave the most importance to language skills dimension with respect to computer's role in CALL. In other words, CALL is effective in improving students' language skills. Other dimensions with respect to computer's role were overall effect of computer and motivation dimensions. However, the students were undecided about the overall and motivational effects of computers.

The results for teacher's role subscale indicated that students found teacher assistance dimension to be the most effective. That is to say, students in the preparatory school need teacher assistance in CALL classes and this shows that the students do not feel proficient enough in English to be able to study on their own in the laboratory. The other dimensions were teacher guidance and teacher presence. However, the students were not satistified as concerned these dimensions. Since with respect to teacher guidance, teachers are not good at guiding students in the computer lab because most of them are not trained in computer-assisted language teaching. Additionally, teacher presence does not mean much to the students. The reason for this is that teacher only

monitors or remains in the lab class for promoting silence since the teachers are not well equipped with training.

The findings of the students' expectations from the teacher subscale indicated that the students gave the most importance to lab activities guided by the teacher. They want to be engaged in various activities guided by the teacher in lab courses. The other dimension was overall guidance by the teacher. Students were undecided about this dimension. Howeover the second item in this dimension showed that students tend to work in groups under the guidance of the teacher.

In general both students and teachers are undecided about computer's role in language learning. Moreover, both students and teachers think that teacher is an effective component of computer-assisted language learning.

It can be concluded from the findings that both students and teachers agree that time allocated for studying on the computer de-motivates students. After working on the computer for some time, they get bored because of long class hours and both repetitive and uncreative activities on the computer. Conversely, they agree that vocabulary, grammar, reading, pronunciation and listening activities done through using computer are effective.

As for the teacher's role, both students and teachers agree that teacher feedback makes students study more efficiently and when teacher helps the students deal with problematic questions students can continue their studies more comfortably. There were disagreements between teachers and students when other items were concerned. This should be apperantly because of the lack of teacher training in CALL.

Additional questions asked to the teachers showed that teachers think that computer leads to meaningful learning. However, they are undecided about computer's facilitating social organization of learning which is a prerequisite for meaningful learning (Ashburn, 2006). Teachers might be thinking that computer alone can not lead to social organization of learning but via computers it is the teacher who facilitates meaningful learning. Lastly, teachers think that their guidance in lab courses increases students' achievement.

5.3 Implications

5.3.1 Implications for practice

The first major finding of the study is that teacher is very effective in CALL. Thus, students should not be left alone in the computer laboratories especially at the initial stages of the language learning process.

Secondly, as both students and teachers in Zonguldak Karaelmas University Preparatory School are undecided about computer's effectiveness in language learning institutions either should not integrate CALL into their curriculum or integrate it by bearing the weaknesses related to CALL found in the current thesis.

Additionally, it has been found that students believe the most effective dimension of computer's role is language skills. Thus, it can be assumed that language learners who want to boost their language skills should study on the computer. However, it has also been observed that computer is not effective in improving speaking and writing skills. Therefore, these skills within the computer should also be improved by installing new software or renewing the hardware. That is to say, technological facilities must be improved.

Next, motivation dimension of computer's role was found to be the least effective dimension in language learning. This indicates that students are unwilling while studying on computer because of timing matters, technical problems and repetitive work. Therefore, the course hours should not be too long and the hardware should be new and enjoyable activities like motivating games or chat facilities should be integrated into the courses. In addition, the laboratory atmosphere can be de-motivating for students because it is too large and crowded. Lab classes should be rearranged to enhance a fruitful CALL environment.

Another major finding of the study is that according to the students the most effective dimension of teacher's role is the assistance provided for them. Given this finding, teachers should help students where necessary. Moreover, it has been found that students are undecided about teacher presence in labs. This may be because of the management problems faced by the teachers in the laboratories. It is hard work for teachers to deal with each student in a 50 minutes Lab session at a time. Once again, necessary conditions by providing small lab classes for only one class and lessening the lab hours should be ensured to facilitate a cooperative environment. At this point, the administrators should take the necessary precautions to provide better conditions. That is to say, they should provide smaller lab classes. By this way, teachers can deal with the students more easily. Moreover, to ensure that the teachers are more helpful and tolerant towards the students and manage the laboratory classes more efficiently –pre and in-service training can be given to the teachers in ELT undergraduate departments and preparatory schools. Some teachers in Zonguldak Karaelmas University reported in the questionnaire that they received training in teaching English with computers. In fact, it

was not how to teach with computers, it was training in how to use the new program. Therefore, teachers should be englightened about the strategies to integrate computers into their teaching styles.

Furthermore, another finding about teacher's role is related to teacher guidance dimension. The students seemed to be undecided about guidance issue. Thus, this finding implies that teachers should not be authoritative or repressive, and they should get training in how to guide students in a self-access context.

The next finding of the study concerning the expectations from the teacher dimension is that enjoyable and educative lab activities guided by the teacher should be integrated in CALL. Therefore, teachers can make a needs analysis first and then design a computer-assisted course plan which will meet the needs and expectations of their students best.

What is more, the questionnaires employed in this study might serve as checklists to further conduct a needs analysis. In other words, other institutions might use these questionnaires by making some or no changes on them to evaluate their own CALL practices.

Moreover, people from other institutions might read the teachers' and students' additional comments on CALL practices in Z.K.U. Then, they might make use of Z.K.U. teachers' and students' suggestions and comments to promote the quality of CALL practices within their institutions.

This study was conducted within a particular institution, Zonguldak Karaelmas University Preparatory School. Therefore, some of the pedagogical implications drawn

from the study mainly concern the students, teacherss and the administrators of the institution in particular (See Appendices D, E, F, G).

5.3.2 Implications for Further Research

This study examined the perceptions of students and teachers of computer's role and teacher's role in CALL. Since computer session observations could not be made due to time limitations, further research involving computer session observations may be conducted in order to better understand the areas in which students and teachers face problems and how CALL practices are carried out.

Only Z.K.U. Preparatory School was included in the current study. However, a more comprehensive study including several schools can be conducted. In this way, the findings can be generalized.

Additionally, since this study was a local one it might be replicated by other researchers from various universities. In this way, other institutions will have the opportunity to assess the CALL practices in their own institutions and increase the quality of CALL classes within their curriculum as well.

Moreover, a research looking into the relations among teachers' background variables and teachers' CALL perceptions can be conducted.

The current study looked at the efficiency of CALL in general by examining the teachers' and students' perceptions of computer's role and teacher's role. However, experimental studies which compare the effectiveness of CALL with traditional instruction on the mastery of specific language skills (e.g. only listening skills, only reading skills etc.) can be conducted.

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APPENDIX A: STUDENT'S QUESTIONNAIRE (TURKISH VERSION)

Sevgili Öğrenci,

Bu çalışmanın amacı, bilgisayar destekli İngilizce öğrenimi sunulan laboratuar derslerinde öğretmenlerin uygulamalarıyla ilgili sizlerin görüşleri hakkında bilgi edinmektir. **Adınızı-Soyadınızı** yazmanıza **gerek yoktur**. Elde edilen bilgiler tamamen bilimsel amaçlar için kullanılacaktır, bu yüzden çalışmanın amacına ulaşabilmesi için **lütfen samimiyetle cevap veriniz** ve **hiçbir ifadeyi cevapsız bırakmayınız.**

Yardımlarınız için teşekkür ederim.

Tuğba KÜÇÜK
Orta Doğu Teknik Üniversitesi
Eğitim Bilimleri Bölümü

I. Bölüm

1. Yaşınız: ……

2. Cinsiyetiniz ☐ Kız ☐ Erkek

3. Annenizin en son bitirdiği okul:
- ☐ Okuryazar değil
- ☐ Okuryazar ama bir okulu bitirmedi
- ☐ İlkokul mezunu (5 yıllık)
- ☐ Ortaokul mezunu
- ☐ Lise mezunu
- ☐ Üniversite mezunu
- ☐ Üniversite üstü (Yüksek lisans veya doktora)

5. Babanızın en son bitirdiği okul:
- ☐ Okuryazar değil
- ☐ Okuryazar ama bir okulu bitirmedi
- ☐ İlkokul mezunu (5 yıllık)
- ☐ Ortaokul mezunu
- ☐ Lise mezunu
- ☐ Üniversite mezunu
- ☐ Üniversite üstü (Yüksek lisans veya doktora)

4. Hangi kurdasınız: B ☐ C ☐ D ☐

5. Daha önce bilgisayar destekli başka bir ders aldınız mı? Evet ☐ Hayır ☐
Evet ise lütfen hangi ders olduğunu belirtiniz …….

6. Okul dışında boş zamanlarınızda bilgisayardan İngilizce çalışıyor musunuz?
Evet ☐ Hayır ☐

II. Bölüm Bu bölümde bilgisayarın İngilizce öğretimindeki rolüne ilişkin bazı ifadeler yer almaktadır. Lütfen, soruları okulumuzdaki lab uygulamalarını göz önünde bulundurarak cevaplayınız.

No	Lütfen, sizin görüşünüzü en iyi biçimde yansıtan kutuyu (√) şeklinde işaretleyiniz ve lütfen her bir ifade için yalnızca bir cevap seçiniz.	Kesinlikle Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
1	Bilgisayarın İngilizce öğrenmem açısından ders kitabından bir farkı yoktur.					
2	Bana göre bilgisayar İngilizce öğrenimim için tamamlayıcı bir unsurdur.					
3	LAB'da çalışırken İngilizce'yle ilgili aklıma takılan soruları çözmemde bilgisayar faydalı olmuyor.					
4	Bilgisayar yeni konular öğrenmemde etkilidir.					
5	Bilgisayardaki dinleme aktiviteleri(LISTENING) İngilizce öğrenmemde etkilidir.					
6	Bilgisayardaki okuma aktiviteleri (READING) İngilizce öğrenmemde etkilidir.					
7	Bilgisayardaki yazma aktiviteleri (WRITING) İngilizce öğrenmemde etkilidir.					
8	Bilgisayardaki telaffuz aktiviteleri (PRONUNCIATION) İngilizce öğrenmemde etkilidir.					
9	Bilgisayardaki kelime aktiviteleri (VOCABULARY) İngilizce öğrenmemde etkilidir.					
10	Bilgisayardaki dilbilgisi aktiviteleri (GRAMMAR) İngilizce öğrenmemde etkilidir.					
11	Bilgisayardaki konuşma aktiviteleri (SPEAKING) İngilizce öğrenmemde etkilidir.					
12	Bilgisayardaki sözlükler İngilizce öğrenmemde etkilidir.					
13	LAB ortamında bilgisayarın arkadaşlarımla etkileşimimi kısıtlaması öğrenme isteğimi azaltıyor.					
14	LAB dersinde sadece bilgisayarda çalışmak İngilizce öğrenmem açısından faydalı oluyor.					
15	Bilgisayar İngilizce'deki eksiklerimi görmemde etkili oluyor.					
16	LAB'da yaşadığım teknik problemler (bozuk kulaklıklar ve çalışmayan mikrofonlar gibi) motivasyonumu düşürüyor.					
17	50 dakika aralıksız bilgisayar başında çalışmak motivasyonumu düşürüyor.					
18	Bilgisayarda cevabını bulamadığım sorular olunca öğrenme hevesimi yitiriyorum.					
19	Bilgisayar yapamadığım soruların cevabını açıklamadığında motivasyonum düşüyor.					
20	LAB'da bilgisayardan İngilizce çalışmak motive edici olmuyor.					
21	LAB'da bilgisayardan İngilizce çalışmak faydalı olmuyor.					

III. Bölüm Bu bölümde LAB derslerinde öğretmenlerin uygulamalarıyla ilgili bazı ifadeler yer almaktadır. Lütfen, soruları okulumuzdaki lab uygulamalarını göz önünde bulundurarak cevaplayınız.

No	Lütfen, sizin görüşünüzü en iyi biçimde yansıtan kutuyu (√) şeklinde işaretleyiniz ve lütfen her bir ifade için yalnızca bir cevap seçiniz.	Kesinlikle Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
1	LAB dersinde öğretmen bilgisayar çalışmalarımla özel olarak ilgilendiğinde daha iyi öğreniyorum.					
2	LAB dersinde öğretmen yanlışlarımı bilgisayara göre daha anlaşılır bir şekilde açıklıyor.					
3	LAB dersinde öğretmenin bilmediğim kelimeleri söylemesi öğrenmemi kolaylaştırıyor.					
4	LAB'da öğretmen olmadığı zaman aktiviteleri yapmıyorum.					
5	LAB dersinde öğretmen gözetimi olmadığında derse konsantre olamıyorum.					
6	LAB'da programdaki yazma bölümünü öğretmenin rehberliğinde yaptığımda daha kolay yazabiliyorum.					
7	LAB'da okuma parçalarını öğretmenin rehberliğinde okuduğumda daha iyi anlıyorum.					
8	LAB dersinde takıldığım sorularda öğretmen yardımcı olduğu zaman çalışmama rahatlıkla devam edebiliyorum.					
9	LAB'da öğretmen varken daha hevesli çalışıyorum.					
10	Öğretmenin her LAB dersinde o gün hangi aktiviteleri yapmam gerektiğini bana söylemesi başarımı artırıyor					
11	LAB dersinde öğretmenin yardımıyla eksiklerimi daha iyi tamamlıyorum.					
12	Öğretmenim bilgisayarla eğitim konusunda bana öyle güzel rehberlik ediyor ki bilgisayarı kendi öğrenme yöntemlerimle uyumlu hale getirebiliyorum.					
13	LAB'da öğretmen desteğinin olması daha iyi öğrenmemi sağlıyor.					
14	Öğretmenin LAB'daki çalışmalarım hakkında dönüt (geri bildirim) vermesi daha verimli çalışmamı sağlıyor.					
15	Başımızda bir hoca durmuyor olsaydı lab derslerine gelmezdim.					

Yukarıda belirtilen konular ile ilgili başka belirtmek istedikleriniz varsa yazınız.

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IV.Bölüm Bu bölümde LAB derslerinde öğrencilerin öğretmenlerden beklentileriyle ilgili bazıifadeler yer almaktadır. Lütfen, okulumuzdaki lab uygulamalarını göz önünde bulundurarak cevaplayınız.

No	Lütfen, sizin görüşünüzü en iyi biçimde yansıtan kutuyu (√) şeklinde işaretleyiniz, ve lütfen her bir ifade için yalnızca bir cevap seçiniz.	Kesinlikle Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
1	Öğretmenim LAB dersinin amaçlarını ve hedeflerini bana açıklarsa LAB çalışmalarına ilgim artar**.**					
2	Öğretmenim LAB'da Success dersinde işlediğimiz konuyu grup içinde tekrar ettirirse daha iyi öğrenirim.					
3	Öğretmenim LAB'da gruplar halinde eğlenceli ve öğretici alıştırmalar yaptırırsa daha kolaylıkla öğrenirim.					
4	Öğretmenim LAB'da öğrencilerin ortak çalıştıkları bölümlerin sonunda en çok puan alanı ödüllendirirse derse ilgim artar.					
5	Öğretmenim bana LAB'da yaptırım gücü olan etkinlikler (zorunlu ödevler v.b.) verirse ders daha verimli geçer.					
6	Öğretmenim LAB'da 15 veya 20 dakika kelime oyunu oynatırsa ders daha verimli olur.					
7	Öğretmenim LAB'da telaffuz aktiviteleri yaptırırsa daha iyi öğrenirim.					
8	Öğretmenim LAB'da çeşitli oyun ve aktivitelerle rekabet ortamı yaratırsa motive olurum.					
9	Öğretmenimin bizi grup halinde çalıştırması rekabeti artırarak daha iyi çalışmamı sağlar.					
10	Öğretmenim laboratuarda herkesi aynı şeye aynı zamanda çalıştırmaya yönlendirirse LAB dersi daha etkili olur.					

1.Sizce Laboratuar derslerini daha verimli kılmak için öğrenciler başka neler yapabilir?

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2.Sizce Laboratuar derslerini daha verimli kılmak için öğretmenler başka neler yapabilir?

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3. Sizce Laboratuar derslerini daha verimli kılmak için idareciler başka neler yapabilir?

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Yardımlarınız için çok teşekkür ederim!!!

☺

APPENDIX B: STUDENT'S QUESTIONNAIRE (ENGLISH VERSION)

Dear Students,

The aim of this study is to learn your perceptions of the teachers' applications in English CALL classes. You do not need to transcribe your **name and surname.** The data obtained will be used for scientific purposes, therefore for the study to fulfill its purpose please answer the questions cordially and **answer all the questions.**

Thank you for your help.

Tuğba KÜÇÜK

Middle East Technical University

Department of Educational Sciences

Section I

1. Age: ……

2. Sex □ Female □ Male

3. Your mother last graduated from:
- □ Illiterate
- □ Literate but did not attend any schools
- □ 5 year primary school graduate
- □ Secondary school graduate
- □ High school graduate
- □ Undergraduate degree
- □ Graduate (master's or doctorate) degree

5. Your father last graduated from:
- □ Illiterate
- □ Literate but did not attend any schools
- □ 5 year primary school graduate
- □ Secondary school graduate
- □ High school graduate
- □ Undergraduate degree
- □ Graduate (master's or doctorate) degree

4. What level are you? B □ C □ D □

5. Have you ever taken any other CALL courses? Yes □ No □

If yes please transcribe its name on the blankprovided…….

6. When you are not at school do you study English on the computer in your free time?
Yes □ No □

Section II **There are some statements about the role of computer in language education in this section. Please, answer each considering the lab applications in our school.**

No	*Please put a (√) in the box which reflects your point of view best, and please choose only one answer for each statement.*	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	Computer is not different from the book from the point of my learning English.					
2	In my opinion, computer is a complementary factor for my learning English.					
3	Computer is not useful for answering the problematic questions I come across while studying English in the LAB.					
4	Computer is effective in my learning new subjects.					
5	The listening activities in the computer are effective in my learning English.					
6	The reading activities in the computer are effective in my learning English.					
7	The writing activities in the computer are effective in my learning English.					
8	The pronunciation activities in the computer are effective in my learning English.					
9	The vocabulary activities in the computer are effective in my learning English.					
10	The grammar activities in the computer are effective in my learning English.					
11	The speaking activities in the computer are effective in my learning English.					
12	The dictionaries in the computer are effective in my learning English.					
13	Computer's limiting my interaction with my classmates in the LAB decreases my will to learn.					
14	My studying only on the computer is useful for my learning English in the LAB.					
15	Computer is effective in letting me see my incompetence in English.					
16	Technical problems (broken headphones and microphones) which I encounter in the LAB decreases my motivation.					
17	Studying on the computer for 50 minutes, nonstop, decreases my motivation.					
18	I lose my enthusiasm to learn when I can not find the answers to the questions on the computer.					
19	My motivation decreases when problematic questions are not explained by the computer.					
20	It is not motivating to study English on the computer in the LAB.					
21	It is not useful to study English on the computer in the LAB.					

Section III In this section there are some statements about the teachers' applications in lab courses. Please, answer the questions considering the lab applications in our school.

No	*Please put a (√) in the box which reflects your point of view best, and please choose only one answer for each statement.*	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	In the LAB course I learn better when the teacher is interested in my studies.					
2	In the LAB course the teacher explains my mistakes better than the computer.					
3	Teacher's providing the Turkish equivalents of the unknown words in the LAB facilitates my learning.					
4	I do not do the activities when the teacher is not in the LAB.					
5	In the LAB course I can not concentrate on the lesson when there is no teacher inspection.					
6	In the LAB when I do the writing section under the guidance of the teacher I can write better.					
7	In the LAB I understand the reading passages better when I read them under the guidance of the teacher.					
8	In the LAB course I can continue studying comfortably when the teacher helps me with the problematic questions.					
9	I study more enthusiastically when there is a teacher in the LAB.					
10	Teacher's telling me what activities to do that day increases my motivation.					
11	In the LAB course I make up for my deficiencies better with the help of the teacher.					
12	My teacher guides me on CALL in such a good way that I can adjust it with my own learning methods.					
13	Teacher assistance in the LAB enables me to learn better.					
14	Teacher's giving me feedback on my studies enables me to study more effectively.					
15	If there were not any teachers inspecting us I would not attend the LAB classes.					

If you have other things to mention about the topic please transcribe in the blanks provided.

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Section IV

In this section there are some statements about students' expectations from the teachers. Please, answer the questions considering the lab applications in our school.

No	*Please put a (√) in the box which reflects your point of view best, and please choose only one answer for each statement.*	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	My interest in lab activities increases if my teacher explains the aims and goals of the lab course to me.					
2	I learn better if the teacher revises the topic which we learned in Success course in the LAB in groups.					
3	I learn more easily if my teacher makes us do enjoyable and instructional exercises in groups.					
4	I get more interested in the lesson if my teacher awards the highest scorer at the end of the common activity sections in the LAB.					
5	Lab lesson becomes more efficient if my teacher gives me compulsory assignments.					
6	Lab lessons become more efficient if my teacher makes us play vocabulary games for 15 or 20 minutes.					
7	I learn better if my teacher makes us do pronunciation activities.					
8	I get motivated if my teacher creates rivalry among students with various games or activities.					
9	Teacher's making us study in groups by increasing rivalry among students makes me study better.					
10	If my teacher guides us to study the same thing at the same time, the lab lesson becomes more effective.					

1. What else can the students do to make the LAB courses more effective in your opinion?

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2. What else can the teachers do to make the LAB courses more effective in your opinion?

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3. What else can the administrators do to make the LAB courses more effective in your opinion?

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Thank you very much for your help!!!

APPENDIX C: TEACHER'S QUESTIONNAIRE

CONSENT LETTER FOR THE TEACHERS

Dear Colleagues,

I am currently enrolled in 2009 MA Curriculum and Instruction Program at Middle East Technical University. I am carrying out a research study on teachers' and students' perceptions of the use of computer in language teaching and what roles the teachers should have in the lab environment. This study, whose main instruments are two questionnaires, is expected to contribute to the computer-assisted language learning program of Zonguldak Karaelmas University English Preparatory School, the literature and my research. Therefore, I ask you to answer the questions as honestly as possible. Be sure that your responses will be kept confidential, and your completion of the questionnaire will be regarded as consent for my using the data obtained in my research study.

You should not transcribe your name on the questionnaire. Finally, if you would like to receive feedback on the results of this research study, please transcribe your e-mail address on the blank provided at the end of the questionnaire. Thank you very much for devoting your time and contributions.

Tuğba Küçük
Curriculum and Instruction
Middle East Technical University, ANKARA
tuuba.kucuk@yahoo.com

Section I- Background Information

Please, tick (√) the suitable answer for you.

1. Female ( ) Male ( )

2. Which program did you last graduate from?

B.A. degree ( ) M.A. degree ( )

3. Which university did you graduate from? ……..

4. What was your department? ……..

5. How long have you been teaching totally?

1 to 4 years ( ) 9 to 12 years ( ) 5 to 8 years ( ) more than 13 years ( )

6. How long have you been teaching in Prep School totally?

1 to 4 years ( ) 9 to 12 years ( ) 5 to 8 years ( ) more than 13 years ( )

7. Had you taught English with computer before you came here?

YES ( ) NO ( )

9. Have you received any training about how to teach English with computers?

YES ( ) NO ( )

Section II **Please *put a (√) in the box which reflects your point of view best, and please choose only one answer for each statement. Please answer the questions regarding the laboratory applications in our school.***

No	Items concerning the role of computer in language teaching	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
		SA	A	U	D	SD
1	Computer LAB is inferior to traditional methods of teaching in presenting a subject.					
2	Computer isn't effective in correcting students' errors.					
3	Computer restricts social interaction which is required in language learning contexts.					
4	Computers do not lead to meaningful learning.					
5	Lack of interaction while studying on the computer demotivates students.					
6	Computer is competent in leading effective language learning.					
7	Computer does not facilitate social organization of learning.					
8	Computer increases student achievement.					
9	Computer is effective in teaching students new language points.					
10	The vocabulary activities in the computer are effective in teaching students English.					
11	The grammar activities in the computer are effective in teaching students English.					
12	The reading activities in the computer are effective in teaching students English.					
13	The writing activities in the computer are effective in teaching students English.					
14	The pronunciation activities in the computer are effective in teaching students English.					
15	The listening activities in the computer are effective in teaching students English.					
16	The speaking activities in the computer are effective in teaching students English.					
17	The dictionaries in the computer are effective in teaching students English.					
18	Studying on the computer for 50 minutes without any break decreases the motivation of the students.					
19	Students are not always motivated while studying on the computer.					
20	Computer is necessary for students' language education.					

Section III ***Please put a (√) in the box which reflects your point of view best, and please choose only one answer for each statement. Please answer the questions regarding the laboratory applications in our school.***

No	Items concerning teachers' perceptions of their presence in computer LABs	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
		SA	A	U	D	SD
1	Students learn better when I deal with them in person in LAB courses.					
2	I explain the students' mistakes better than the computer.					
3	My explaining the meaning of unknown words in LAB courses facilitates students' learning.					
4	Nobody completes the online activities when I am not present in LAB courses.					
5	Students cannot concentrate on the lesson when there is no teacher inspection in the LAB.					
6	Students can write essays, letters etc. more easily under my guidance in LAB courses.					
7	Students comprehend the texts better when they read under my guidance in LAB courses.					
8	Students continue their studies comfortably when I help them with the problematic questions in LAB courses.					
9	Students study more enthusiastically when I am in the LAB.					
10	My guidance on students' studies increases their achievement in the LAB.					
11	Students make up for their language deficiencies better with my help in LAB courses.					
12	I guide the students in LAB in such a way that they can easily adjust their learning styles to computer use.					
13	My giving feedback to the students makes them study more efficiently in the LAB.					
14	Even if I don't check what students are doing in lab courses they continue working enthusiastically.					
15	My telling the students what activities they should do increases their achievement.					
16	Teacher assistance in the LAB increases students' achievement.					

Section IV ***Please answer the questions regarding the laboratory applications in our school.***

1. What are the strengths of the laboratory courses in our school?

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2. What are the weaknesses of the laboratory courses in our school?

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3. What do you think students can do to make laboratory lessons more efficient for their learning?
4. What do you think teachers can do to make laboratory lessons more efficient?
5. What do you think coordinators can do to make laboratory lessons more efficient?

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Would you like to receive feedback on the results of this research study? If yes, please transcribe your mail address on the blank provided.

Your e-mail address: ……

Thank you very much for your cooperation!

APPENDIX D

B LEVEL STUDENTS' RESPONSES TO THE OPEN-ENDED QUESTIONS

Focus: Further comments on the role of computer in English language teaching and teachers' applications in the lab.	
Comments	**Count**
We attend lab lessons since it is compulsory, not willingly.	2
Lab lessons are boring.	2
The program is not attractive.	1
The computer hardware must be the latest technology.	1
They should allow the use of internet.	1

Focus: Q1- What else can the students do to make lab lessons more efficient?	
Suggestions	**Count**
They should study more enthusiastically.	3
They should make a study plan before they come to the lab, and they should put this plan into effect.	1
They should follow the study plan the teacher has prepared for them.	1
They should pay attention to the lesson.	1
They should play games in English in the last 15 minutes.	1

Focus: Q2- What else can the teachers do to make lab lessons more efficient?	
Suggestions	**Count**
They should come up with different activities.	5
They should not wander too much in the lab.	4
They should be more tolerant to the students in the lab courses.	2
They should check whether the students do the exercises or not.	2
They should communicate with the students.	2
The grades of the students after each activity should be monitored by the teachers.	1
Students who can not keep up with the process should be warned.	1
They should not be repressive.	1
They should allow the use of internet.	1

Focus: Q3- What else can the coordinators do to make lab lessons more efficient?	
Suggestions	**Count**
They should decrease the number of lab lessons.	6
They should not forbid internet access.	5
They should supply us with both enjoyable and educational activities.	4
They should provide us with the opportunity to chat with foreign students.	3
They should abolish lab lessons if the applications go on this way.	2
They should let us have access to up-to-date English topics and news.	1
They should let us listen to music.	1
They should overcome technical problems.	1
They should emphasize the importance of lab applications.	1
They should make a grading system, and incorporate lab achievement in students' cumulative GPA.	1
They should install programs which include expressions used in daily life.	1

APPENDIX E

C LEVEL STUDENTS' RESPONSES TO THE OPEN-ENDED QUESTIONS

Focus: Further comments on the role of computer in English language teaching and teachers' applications in the lab.	
Comments	**Count**
It is not a good application practically.	2
The duration of lab lessons is too much.	2
Studying on my own in the lab for two class hours demotivates me.	1
I do not like doing always the same kind of activities.	1
Lesson is learned from the teachers, not from the computer.	1
There are low qualified computers in the labs.	1
Lab lessons seem unimportant because the contents of the lab courses are not tested in the exams. Additionally, no assignments are given concerning the lab courses.	1
The teachers should, firstly, give us enough time to answer the grammar questions on the computer. Then, we should discuss the answers under the guidance of the teachers.	1
We should contact the schools abroad on the net.	1
We must have pen friends.(e-mailing)	1
Coordinators should find more creative and encouraging programs so that I can do the activities on the computer willingly.	1
Internet speed must be increased.	1
Lab lessons are very boring and inefficient.	1

Focus: Q1- What else can the students do to make lab lessons more efficient?	
Suggestions	**Count**
Their aim must be "learning".	2
They should sometimes work in groups.	1
They should not disturb their classmates while they are studying.	1
They should help each other.	1

Focus: Q2- What else can the teachers do to make lab lessons more efficient?	
Suggestions	**Count**
They should bring various enjoyable activities to the lab.	10
They should be more tolerant and understanding towards the students in the labs.	5
They should not be repressive.	2
They should always communicate with the students.	2
They should not wander too much in the lab.	2
They should monitor the students.	1
They should allow us to listen to music in the lab.	1
They should be more willing to teach in the lab.	1
They should make us study up-to-date activities.	1
They should ask questions to us.	1

Focus: Q3- What else can the coordinators do to make lab lessons more efficient?	
Suggestions	**Count**
They should decrease the number of lab lessons.	16
They should renew the computer hardware.	6
They should abolish lab lessons if the applications go on this way.	5
They should not forbid internet access.	5
They should change the lab system.	5
They should abolish the attendance system.	5
They should abolish the restrictions on the computers.	4
They should overcome the technical problems.	3
They should ensure that the computer software includes more dialogues.	3
They should provide us with the opportunity for audible and visual communication on the computers.	3
They should let us do other English activities.	2
They should provide us with a more hygienic environment.	1
They had better substitute classroom lessons for the lab lessons.	1

APPENDIX F

D LEVEL STUDENTS' RESPONSES TO THE OPEN-ENDED QUESTIONS

Focus: Further comments on the role of computer in English language teaching and teachers' applications in the lab.	
Comments	**Count**
Internet speed must be increased.	3
The teachers are getting bored during the lab courses.	1
There is lack of feedback in the process.	1

Focus: Q1- What else can the students do to make lab lessons more efficient?	
Suggestions	**Count**
They should study in groups.	6
They should recognize the aim of the lab lessons.	4
They should be ambitious.	3
They should realize their own responsibilities.	2
They should revise what they have learnt in the classroom.	2
They should use the dictionaries included in the software.	1
They should not be prejudiced against the lab courses.	1
They should be willing to learn.	1
They should study in silence.	1
They should ask questions to their teachers when they are confused.	1
They should help each other.	1
If they come to the lab courses by making their own study plans beforehand, the course will be more efficient for them.	1
They should use the lab facilities efficiently.	1
They should criticize themselves.	1

Focus: Q2- What else can the teachers do to make lab lessons more efficient?	
Suggestions	**Count**
They should motivate the students by showing concern for them.	4
They had better not walk in the lab too much.	3
They should make the students study in groups.	3
They should reward the students from time to time.	2
They should let the students study on their own.	2
They should aim to make the students love English.	2
They should not be repressive towards the students.	2
They should help the students when they need it.	1
They should not hurt students' feelings.	1
They should set us free for the last 15 minutes of the lesson.	1
They should help students with their assignments.	1
They should talk us in English in the lab courses.	1
They should communicate with us.	1
They should make the students rehearse the dialogues much more.	1
They should develop more effective study strategies to adapt the students to this course.	1
Teacher control over students' progress should be sounder.	1

They should often control the students.	1
They should provide us with a study plan.	1

Focus: Q3- What else can the coordinators do to make lab lessons more efficient?	
Suggestions	**Count**
They should decrease the number of lab lessons.	22
They should not forbid internet access.	8
They should abolish the attendance system.	8
They should install English games or songs in the computer.	8
They should abolish lab lessons if the applications go on this way.	7
They had better substitute speaking and video lessons for lab lessons.	6
They should change the lab system.	5
They should allow chat facilities.	4
They should provide us with the opportunity to communicate with other prep class students from different countries online.	2
They should compensate for the inadequate number of teachers in the labs because one teacher cannot deal with all the students in person in a large lab.	2
They should let us do other English activities.	2
They should renew the computer hardware.	2
They should allocate 25-30 minutes for internet use or English games.	2
They should provide us with a more hygienic environment.	1
They had better substitute classroom lessons for lab lessons.	1
They should install newer programs.	1
They should install Turkish-English dictionaries in the computers.	1

APPENDIX G

TEACHERS' RESPONSES TO THE OPEN-ENDED QUESTIONS

Focus: Q1-What are the strengths of the laboratory courses in our school?		
Comments	**Count**	**%**
Students' developing autonomous learning	15	30
Opportunity for students to revise the things they have learnt in the class	13	26
Improving grammar skills	10	20
Improving listening skills	7	14
Effective grammar exercises	6	12
Improving pronunciation skills	5	10
Listening to the native pronunciation of the words	5	10
Improving all language skills	5	10
Students' working on their own weak points	4	8
Supporting reading comprehensively	4	8
Being self-confident as a result of the sense of keeping up with the technology	4	8
Teacher guidance	3	6
Enough amount of computers	2	4
Activities designed in an integrated way	2	4
Self-discovery with teacher assistance	2	4
Improving writing skills	1	2
Improving vocabulary knowledge	1	2
Opportunity for shy students to be comfortable while studying alone	1	2
Monitoring of teacher	1	2
Students' controlling their own pacing according to their needs and potentials	1	2
Being a supplementary teaching/learning device	1	2
Feedback from the teacher	1	2
Effective conversations for students' learning	1	2

Focus: Q2-What are the weaknesses of the laboratory courses in our school?		
Comments	**Count**	**%**
The duration of the lab lessons' being too long (2 consecutive lessons)	10	20
Students' getting bored because of the long lab class hours (50 minutes)	10	20
Technological facilities being inadequate	7	14
Devices' not working properly	7	14
The inefficiency of lab lessons as a result of too many lab courses in a week (8 courses in a week)	7	14
Demotivated students	6	12
Too crowded labs for teachers to deal with the students effectively (2 classes, a total of approximately 45 students, in a single lab)	4	8
Lack of variety in exercises	3	6
Lack of interaction with the teacher	3	6

Students' being unable to practice speaking	3	6
Lack of interaction among students	2	4
Having difficulty in managing students	2	4
Having difficulty in motivating students	2	4
Lack of students' training in computer use and software program	2	4
Students' not being responsible for their own progress	2	4
No peer correction	1	2
Teachers' being unable to attend their own classes' lab lessons	1	2
Physical conditions are not motivating	1	2
Having difficulty in monitoring students' progress	1	2
Too much noise because of the crowded lab	1	2
Computer's being unable to correct the errors of the students	1	2
Students' not knowing how to study	1	2
As a result of following the same pattern, computer courses' being monotonous	1	2
Activities being not demanding for the students	1	2

Focus: Q3- What do you think students can do to make laboratory courses more efficient for their learning?		
Suggestions	**Count**	**%**
They should be aware of the importance of lab lessons.	12	24
Students should try to learn how to be more autonomous.	4	8
They should have intrinsic motivation.	4	8
They should be enthusiastic and try to use all kinds of activities effectively.	3	6
They should plan their activities.	2	4
They should be determined to learn English.	2	4
They should give more importance to the listening and vocabulary activities.	1	2
They should cooperate with each other.	1	2
They should give more importance to the speaking and pronunciation activities.	1	2

Focus: Q4- What do you think teachers can do to make laboratory courses more efficient?		
Suggestions	**Count**	**%**
Teachers should monitor students' progress.	6	12
They should guide the students.	5	10
Teachers should enhance learner autonomy.	4	8
They should be facilitators, motivators and controllers.	4	8
They should assign some easy-to-achieve tasks as well.	4	8
They should give the students feedback as soon as possible.	3	6
They should make the students aware of the effectiveness of using computers in learning English.	3	6
They can give the students some lab assignments.	3	6
They should be ready to help the students any time they need it.	3	6
They should inform the students about the aim of the lab courses.	2	4

Teachers should perceive lab lessons as important as the classroom lessons.	1	2
They should encourage the students to complete the activities on the computer.	1	2
They should improve themselves as guides.	1	2
They should set effective goals for the students.	1	2
They must make a study plan for the students incase they need it.	1	2
They should be alert during the lessons incase a problem occurs.	1	2
They should direct the students towards learning with and from their peers.	1	2
Teachers should look for new ways to guide the students who feel themselves lost in the lab.	1	2
They should try to be informed about what a instructor may do in these classes.	1	2
Teachers should interact with the students.	1	2
They should not be repressive.	1	2

Focus: Q5- What do you think coordinators can do to make laboratory courses more efficient?		
Teachers' Suggestions	**Count**	**%**
They can reduce the duration and number of the lab lessons.	20	40
The number of exercises, especially grammar and reading, can be increased.	6	12
They should find the most suitable computer program for the students.	4	8
They should supply the students with a variety of game and chat programs.	4	8
They should make a grading system, and incorporate lab achievement in students' cumulative GPA.	3	6
Microphones should be repaired so that the students will be able to record and listen to their own voices.	3	6
Some precautions to prevent some students from logging into the internet must be taken.	2	4
The computers should be maintained regularly.	2	4
Students may be allowed to have access to some interesting games when they complete their activities successfully.	2	4
They should attend their courses regularly rather than making other teachers attend those classes.	2	4
They should organize a CALL orientation program for the novice teachers at the beginning of each year.	2	4
They should assign a sufficient number of teachers to each lab (especially to the ones which host two classes at the same time).	1	2
Computers and additional devices-mouse, audio devices etc. should be updated.	1	2
They should ensure that lab lessons are offered in smaller classes.	1	2
They should arrange lab lessons in such a way that teachers can attend their own students' classes.	1	2
A seminar about the use and benefits of lab lessons can be given to the	1	2

students at the beginning of each academic year.		
Coordinators' Suggestions	**Count**	**%**
They should control the lab lessons regularly.	1	2
They should be open to criticism coming both from the students and the teachers.	1	2
They should follow the pacing of the lab courses and interfere where necessary.	1	2
They should provide the teachers with some seminars on CALL.	1	2
A total cooperation (including coordinators, teachers and students) towards the aim can increase the efficiency of the means.	1	2