

WEB-BASED LEARNING TOOL: DESIGN AND DEVELOPMENT OF AN ONLINE
BASIC ENGLISH SUPPORT MATERIAL FOR YOUNG CHILDREN
AT ELEMENTARY LEVEL

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ABSTRACT

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This study investigated the students' and teacher's perception of a web-based learning tool for an English course which was given as a second language at elementary level. The site was used as a supplementary material for 8th grade students in METU College. The researcher developed the site specifically for this study and in the development process internet and database technologies were used.

The data were collected from the 22, 8th grade students through a computer attitude scale and a questionnaire, which was developed by the researcher. An interview with the course teacher was conducted. Descriptive statistics, frequency distributions and researcher observation were used to express the results of the study.

The results showed that the site was perceived positively by more than half of the students in terms of vocabulary learning through the dictionary and activities page. The site was evaluated by the students and nearly most of the students found the site to be useful in terms of acquiring hearsay through the dictionary and the chat page of the site. More than half of the students perceived the chat environment more suitable for communication than classroom environment. The course teacher evaluated the site to be useful in terms of vocabulary learning, hearsay and online communication.

Keywords: Second language learning, computer-assisted language learning, online communication.

ÖZ

WEB-TABANLI ÖĞRENME ARACI: ORTAOKUL SEVİYESİNDEKİ ÇOCUKLAR İÇİN ÇEVİRİMİÇİ TEMEL İNGİLİZCE DESTEK MATERYALİNİN TASARIMI VE GELİŞTİRİLMESİ

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Yüksek Lisans, Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü

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Bu çalışmanın amacı ortaokul öğrencilerine yönelik ikinci dil olarak verilen İngilizce dersi için hazırlanan web tabanlı öğrenme aracının öğrenci ve öğretmen algılarını araştırmaktır. Site ODTÜ Koleji'nde 8. sınıf öğrencilerine destek aracı olarak hazırlanmıştır. Site özellikle bu çalışma için internet ve veritabanı teknolojileri kullanılarak araştırmacı tarafından geliştirilmiştir.

Veriler 8. sınıfa devam eden 22 öğrenci üzerinde yapılan bilgisayara karşı tutum testi ve araştırmacı tarafından hazırlanan anket ve ders öğretmeni ile yapılan görüşme ile toplanmıştır. Araştırmanın sonuçları betimsel istatistik, frekans dağılımları ve araştırmacı gözlemleri vasıtası ile sunulmuştur.

Araştırmanın sonuçları göstermiştir ki sitede bulunan sözlük sayfası ve aktiviteler sayfası kelime öğrenimi açısından öğrencilerin yarısından fazlası tarafından olumlu olarak algılanmıştır. Site içerisinde bulunan sözlük sayfası ve sohbet sayfası kulak dolgunluğu kazanımı açısından yaklaşık çoğu öğrenci tarafından yararlı olarak değerlendirilmiştir. Öğrencilerin yarısından fazlası sohbet ortamının tartışma için sınıf ortamından daha uygun olduğunu belirtmişlerdir. Ders öğretmeni siteyi kelime öğrenme, kulak dolgunluğu ve çevrimiçi iletişim açısından yararlı olarak değerlendirmiştir.

Anahtar Kelimeler: İkinci dil öğrenimi, bilgisayar destekli dil öğrenimi, çevrimiçi iletişim.

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TABLE OF CONTENTS

ABSTRACT	iii
ÖZ	v
ACKNOWLEDGEMENT	vii
TABLE OF CONTENTS.....	viii
LIST OF TABLES.....	xi
LIST OF FIGURES	xiii
CHAPTER	
1. INTRODUCTION.....	1
1.1 Background of the Study	1
1.2 Statement of the Problem	4
1.3 Purpose of the Study.....	5
1.4 Significance of the Study	7
1.5 Definitions of Terms.....	8
2. REVIEW OF LITERATURE.....	10
2.1 Use of Computers in Education.....	10
2.2 Computer Assisted Language Learning.....	16
2.2.1 History of CALL.....	17
2.2.2 Vocabulary Learning in CALL.....	20
2.2.3 Communication in CALL.....	24
2.2.4 Listening and Pronunciation in CALL.....	28
2.3 MS-Agent Technology.....	31
2.4 Summary	32
3. METHODOLOGY	34
3.1 Research Questions	34
3.2 Design of the Study.....	35
3.3 Web-based Learning Tool.....	36

3.4	Participants	40
3.5	Instruments.....	40
3.5.1	Computer Attitude Scale.....	40
3.5.2	Students' Perceptions about the Web-based Learning Tool Questionnaire	41
3.5.2.1	Dictionary Page Related Questions	42
3.5.2.2	Activities Page Related Questions	44
3.5.2.3	Chat Page Related Questions	45
3.5.2.4	MS-Agent Character Related Questions	46
3.5.3	Interview on Teacher's Perception about the Web-based Learning Tool.....	47
3.6	Data Collection Procedures	48
3.7	Data Analysis Procedure.....	48
3.8	Assumptions.....	49
3.9	Limitations	49
4.	RESULTS	51
4.1	Characteristics of the Participants.....	51
4.2	Students' Attitudes Toward Computers.....	52
4.3	Students' Perceptions about the Web-based Learning Tool.....	53
4.3.1	Students' Perceptions about the Web-based Learning Tool in terms of Vocabulary Learning.....	53
4.3.1.1	Students' Perceptions about the Dictionary Page in terms of Vocabulary Learning.....	54
4.3.1.2	Students' Perceptions about the Activities Page in terms of Vocabulary Learning.....	55
4.3.2	Students' Perceptions of the Web-based Learning Tool in terms of Hearsay	58
4.3.2.1	Students' Perceptions about the Dictionary Page in terms of Hearsay	58
4.3.2.2	Students' Perceptions about the Chat Page in terms of Hearsay	62
4.3.3	Students' Perceptions about the Web-based Learning Tool in terms of Communication.....	63

4.3.4 Problems That Students Faced While Using the Web-based Learning Tool.....	67
4.3.5 How Should the Web-based Learning Tool Improved to be more Effective.....	69
4.3.6 Students' Perceptions about the MS-Agent Character	71
4.4 Teacher's Perception about the Web-based Learning Tool.....	73
4.4.1 Teacher's Perception about the Vocabulary Learning.....	74
4.4.2 Teacher's Perceptions about the Hearsay.....	75
4.4.3 Teacher's Perceptions about the Communication	75
4.4.4 Teacher's Perceptions about the MS-Agent Character.....	76
5. DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS	77
5.1 Discussion.....	77
5.1.1 Vocabulary Learning.....	78
5.1.2 Hearsay	80
5.1.3 Communication.....	81
5.1.4 Problems of the Pages and Expectations	83
5.1.5 The MS-Agent Character	84
5.2 Conclusions	84
5.3 Recommendations for Practice	85
5.4 Recommendations for Researchers.....	86
5.5 Recommendations for Future Research.....	87
REFERENCES.....	89
APPENDICES	
A. Computer Attitude Scale.....	96
B. Students' Perceptions of the Web-based Learning Tool Questionnaire.....	100
C. Teacher Interview Questions	104
D. Samples Pages of the Web-based Learning Tool	105

LIST OF TABLES

TABLE

3.1 Students' perceptions questionnaire main and sub-categories	42
4.1 Characteristics of participants	52
4.2 Summary of sub-scales of the CAS.....	52
4.3 Students' perceptions about the dictionary page in terms vocabulary learning	54
4.4 Students' perceptions about the activities page in terms vocabulary learning	57
4.5 Students' perception about the dictionary page usage summary	59
4.6 Students' perceptions about the dictionary page in terms hearsay	60
4.7 Students experiences in terms of pronouncing	61
4.8 Students' perceptions about the chat page in terms hearsay	62
4.9 Students previous chat use	64
4.10 Students' perceptions on the comparison of the chat environment with the classroom environment in terms of expressing their ideas	64
4.11 Students' perceptions on the comparison of the chat environment with the classroom environment.....	66
4.12 Students' perceptions about the use of the chat environment.....	67
4.13 Students' perceptions about the dictionary page in terms of problems	68
4.14 Students' perceptions about the chat page in terms of problems.....	68
4.15 Students' perceptions about the activities page in terms of problems.....	69
4.16 Students' perceptions about the dictionary page in terms of expectations	70
4.17 Students' perceptions about the activities page in terms of expectations	70
4.18 Students' perceptions about the activities page in terms of expectations	71
4.19 Students' perceptions about the Merlin character in terms its prettiness.....	71
4.20 Students perceptions about the Merlin character's pace of speech.....	72

4.21 Students perceptions about the speech of Merlin character in terms of understandability	72
4.22 Students' perceptions about the Merlin character in terms of functionality	73

LIST OF FIGURES

FIGURE

3.1 Dictionary Page of the Web-based Learning Tool	38
3.2 Activities Page of the Web-based Learning Tool.....	38
3.3 Chat Page of the Web-based Learning Tool.....	39
4.1 Students' perceptions about the vocabulary learning versus time spent in dictionary page.....	55
4.2 Students' perceptions about hearsay versus time spent in dictionary page.....	61
4.3 Students' perceptions about hearsay versus time spent in chat page	63

CHAPTER 1

INTRODUCTION

In this chapter, the background of the study, the statement of the problem, the purpose of the study, the significance of the study and the definitions of the terms will be presented.

1.1 Background of the Study

The human being shows an effort to develop technology because of his or her own needs. Sometimes the developments in the technology bring out new needs for human beings. Some technological developments can be called as “revolutions” for the world. Computer is one and probably the most important of these technological revolutions. With the development of computer it is made possible to overcome some difficult works such as calculations, database systems, etc. in fast and reliable ways. Computers are not only used for great calculations and very complex scientific experiments, but also used in our daily life routines. Word processors, spread sheets, games, etc. are the programs that take part in our routine works. Moreover, with the development of internet; communication and accessing information became easier, faster and cheaper. The development in computer technology also attracted the educators’ attention to concentrate on how to benefit from such a capability. Starting from the early stages of

their development, computers are used in different areas of education for several purposes. Language teaching and learning, especially foreign language teaching and learning got a great deal to benefit from computers. As Özdemir (2001) stated that “in modern age, foreign language, especially English, is at the center of economical, social, scientific, and educational lives.” (p.1) Therefore, there were several great projects with high budgets to explore uses of computers in language learning and teaching. PLATO, TICCAT, ATHENA, ALLP, CAMILLE, OLA, and etc. are some projects that mainly focused on uses of computers for language learning (Levy, 1997).

Contemporary studies focus on effective uses of computers in educational settings. As Kidd (1989) clearly stated that:

“At the present time it seems to be widely accepted that the computer has the potential to be a useful tool in the learning process. What remains to be done is to create courseware that effectively exploits this potential. In addition, one must produce enough good courseware to enable computer to become an integral part of the curriculum.” (p.69)

Foreign language teaching and learning is a great area that has many parts to be investigated. Most of the researchers divide foreign language teaching in four main skill categories. Listening, speaking, reading and writing are the required skills to acquire a foreign language.

There were many researches that tried to explain the acquisition of syntax, grammar and reading. However, it is also important to lighten the acquisition of vocabulary and phonology as Levy (1997) stressed that “SLA research has concentrated primarily on explaining the acquisition of morphology and syntax, a little known about the acquisition of phonology and much less about the acquisition of lexis...” (p.53).

Moreover, Liu, Moore, Graham and Lee (2003) stated that computer technology has the potential of helping language learners in improving oral and listening skills. There is an imbalance where most of the studies focused on reading and writing, however, only few studies focused on listening and speaking.

In learning a foreign language, learners may have acquired some skills but they have difficulties in understanding a native speech in a conversation. Rochet (1989) specially expressed that the students may learned the required skills such as reading and writing, however, foreign language learners have difficulties in perceiving speech. Moreover, he states that there are not so many programs that aim teaching foreign language pronunciation. In his book Grittner (1969) underlines the minimum learning objectives that are essential for communications. For the listening ability, he states that it essential to understand the words in conversations.

Speaking is also an important skill for acquiring a foreign language. Huebener (1960) stresses the importance of speaking skill for foreign language learning that speaking skill can be acquired by much repetition. However, the traditional classroom is very inadequate for offering such an opportunity. On the other hand, speaking skill comes after listening skill. Learners must first understand how a word is pronounced. Then, the learner can try to speak the word. Huebener continues that in order to improve listening skill there are three requirements: attention, concentration and application. The listening can be effective only after giving attention to these requirements.

The language laboratories give opportunities to learners to work individually at their own pace. Moreover, Huebener (1960) gave credit to language laboratories indicating

that enabling students to work with an individualized environment makes students motivated. Moreover, he stated that in acquiring a foreign language, understanding and speaking are the most important essentials and a language laboratory should be supportive within this framework. Language laboratory should be used for giving such a practice opportunity for these essentials. Moreover, he stressed that providing much and regular practice for listening is the fundamental aim of the language laboratory.

Ladefoged (1967) stated that “The ability to produce differences between sounds often comes before the ability to hear these differences.” (p.168, cited in Rochet, 1989). On the other hand, Jones and Fortescue (1991) stated clearly that “learning to recognize and distinguish the sounds of a language is a prerequisite both for effective listening comprehension and for good pronunciation” (p.78). There were different ideas about which one comes first, listening or speaking. As stated above some of the researchers indicated that for a good speaking listening comes first (Paulston, 1976; Fortescue, 1991). First a learner understands how a specific word sounds and then the learner can produce it. After a learner learnt how to produce a word, then he or she will be able to discriminate the words in a normal conversation.

1.2 Statement of the Problem

Physical investments and necessary arrangements are made by the governments in order to increase the use of new technologies in all levels of education. Computer assisted instruction now entered our classrooms, especially private colleges are effectively using this tool and this usage is encouraged by the school directors within different courses. Public schools will be using new technologies especially computer programs and internet applications as supportive materials for their courses.

In order to develop effective and usable applications for classroom instruction various kinds of variables should be investigated. Different areas require some common but mostly different variables to be revealed. Teaching and learning English as a second language is one of areas that should be investigated in different aspects. There is a need to investigate different applications for computer assisted language learning in different educational settings with different means of media. Özdemir (2001) stresses the advantages of new technologies, and states that “easy, cheap, and fast accessibility of computers and internet, and multimedia technologies including visual-auditory interactive skills are creating a new area for foreign language teachers and learners” (p.6). Microsoft Ms-Agent which was used in this study is a new technology that brings some features such as fast sound transfer rate, speech and animations. Whether all these features of this technology within a well designed internet application can be used effectively in foreign language teaching and learning environment needs to be explained clearly.

In their implications for future research chapter Liu, Moore, Graham and Lee (2003) clearly stated that there is a need for explaining how computers can be used to support second language learning (i.e., the kinds of tasks or activities that should be used in what kind of settings). They also stress that most of the studies are at college level, and it is important to conduct a research on K-12 setting.

1.3 Purpose of the Study

This study tries to shed light on understanding different usage areas and purposes of internet environment for foreign language education. Therefore, the web-based learning

tool was prepared as a supportive material for the English course for the 8th grade students at the elementary level.

The purpose of this research is to investigate the web-based learning tool in terms of students' perceptions and the teacher's perception in the context of elementary level second language learning. Liu et al. stressed the importance of student perceptions about the new tools as "because students are the consumers of the new educational tools, their perceptions and evaluations are essential to ensure quality instruction." (p.263)

Presentation of the words, crossword puzzle, and chat environment help young students in their English vocabulary learning and hearsay and students' perceptions about online communication are investigated. This study tries to answer the following main questions:

1. What are the students' and the course teacher's perceptions about the web-based learning tool in terms of vocabulary learning?
2. What are the students' and the course teacher's perceptions about the web-based learning tool in terms of hearsay?
3. What are the students' and the course teacher's perceptions about the web-based learning tool in terms of communication?
4. What problems do the students face while using the web-based learning tool?
5. How should the web-based learning tool be improved to be more effective?
6. What are the students' and the course teacher's perceptions about the internet character used in the web-based learning tool?

1.4 Significance of the Study

Language learning, especially second language learning requires systematic practice and repetition. Students learn the new words in class sessions and they practice what they learn by traditional methods such as continuously writing the direct meaning of the word or using flash cards. However, these traditional methods are not very attractive and are usually boring. On the other hand, today's children; to say were born with computers; they are familiar with them and they like playing and working with computers. Computers bring more attractive and enjoyable features with them, and educational institutions started to benefit from the advantages of the computers. As a result, computers started to take part in educational systems. At the beginning, academic studies mainly concentrated on whether to use computers or not. However, effective uses of computers, different uses of computer applications, the conditions where the use of computers are also studied.

Özdemir (2001) expressed that 'Computer Assisted Language Learning programs with an educational basis can effectively complement and sometimes replace traditional language teaching techniques' (p.7). Therefore, it is significant to investigate in which conditions the use of computers and internet are valuable in the context of teaching and learning English as a second language.

In their implications for future research Liu, Moore, Graham and Lee (2003) gave several suggestions. They indicated that most of the studies focused on anxiety, attitudes and most of them try to explore reading and writing skills. However, there is a need for the investigation of less-explored skills which are speaking and listening. They indicated that although speech recognition with computers have some problems with the available

technology, computers can be effectively used in improving listening skill. They also continue that studies should focus on specially K-12 level, because most of the literature interested with higher grade levels.

The results of this study aims to contribute to the understanding of design and development of phases of computer-assisted language learning. Moreover, this research may help researchers to benefit from the findings in terms of design and development of computer-assisted language learning applications for young learners.

1.5 Definitions of Terms

The following terms will be used by the researcher and explanations are provided so as to assist the reader in understanding the study.

Computer-Assisted Language Learning: “The search for and study of applications of the computer in language teaching and learning”. (Levy, 1997, p.1)

Tool: “For computers to function as tool, the computer need only have some useful capability programmed into it”. (Levy, 1997, p.83)

Web-based learning tool (WBLT): The web site developed by the researcher especially for this study as a supplementary material for the English language course which was given as a second language.

Teacher: In this study teacher refers to English course teacher of the Class 8-D.

Perception: In this study perception is used as seeing, hearing, understanding the site being used, and processing, acquiring and organizing the information got by this experience.

Hearsay: In this study hearsay refers to the first step of hearing pronunciation of a word and becoming familiar with that pronunciation.

Chat: In this study, the term chat refers to electronic chat like MSN or ICQ. In this electronic chat environment, all students write into same room and they all see their writings. Moreover, they can hear what they write.

CHAPTER 2

REVIEW OF LITERATURE

In this chapter, the review of the literature about the use of computers in education, computer-assisted language learning, related research and summary of the literature will be presented.

2.1 Use of Computers in Education

Our world now opens a period which may be called as digital age. Like the industry revolution, countries are trying to catch and utilize amazing technological developments into every area of their technical and social life. Tremendous developments in technical areas directed governments to benefit from its advantages by starting several projects to integrate different uses of technology in social life. In order to facilitate and to speed up the production, procedures of bureaucracy, and etc. different kinds of technological developments were used. When concentrated on the social life, computers are mainly used, for the past decade especially internet has been the most popular tool that plays a great role in our routine works. The term electronic is now used in our daily life communications. E-mail, e-government, e-university, e-lesson, and etc. are the terms that are not strange to hear in social communications.

Governments also started to benefit from technological developments in educational settings. Computers are used in five major areas which are educational research, educational service management, measurement and evaluation, counseling services, computer education and teaching learning activities such as computer aided instruction (İmer, 2000). Further, use of technologies especially computer technology and internet in educational settings became countries' governmental politics.

Turkey also followed these technological developments and made necessary investments required for effective uses of technologies in social context. Uses of technologies in educational settings in Turkey encouraged and became governmental politics, too. In the 'Long Term Strategy and 8th Five Year Development Plan 2001-2005' of Turkish State Planning Organization (2001), use of new technologies in all areas of education, but especially in primary education was strongly expressed that;

“Satisfactory developments in utilization and extension of new technologies in education could not have been ensured. Initiating computerized education at all levels of education with a special emphasis on primary education, providing internet access for every school and producing curriculums as software programs bear great importance.” (p.88)

Turkish State Planning Organization continues to stress the importance of the usage of computers in all levels of education by;

“Technological facilities, particularly computer technology shall be utilized at the utmost level; open university education and new educational methods using high technology shall be put into practice at all levels of education.” (p.89)

As it can be seen from the report of Turkish State Planning Organization, especially in primary education use of computers is a governmental politics. Moreover, it is one of the required strategies in adaptation for European Union. In order to use the computers in schools, first, infrastructure of the schools must be established. Turkish Ministry of National Education started a project called National Education Development Project (NEDP) to establish computer laboratories in 1997. Turkish Ministry of National Education established and continues to establish computer laboratories in public schools for the use of new technologies in educational settings. For example, there are 2.358 multimedia computers and 6.627 PCs, 321 computer laboratories, and 713 computers which are connected to the internet in the public elementary schools in Ankara (MEB, 2002). All these investments were made to increase the use of new technologies in educational settings.

On the other hand, to increase the use of computer technologies in educational settings teachers should be computer literate and appropriate software must be developed for teachers to use in their classrooms. Turkish Council of Higher Education (1998) reformed teacher preparation undergraduate programs of faculties of education via adding some courses into curriculum to extend the usage of information technologies in the schools and to teach how to develop the various kinds of instructional materials that are necessary for classroom instruction. With this reform it is aimed that teacher candidates will be familiar with and know how to use different kinds of technologies such as computer, internet, multimedia, television, video, projector, etc. in their classrooms. Thus, teachers of the future will become familiar with the new technology, and they will use several kinds of technologies in their teaching-learning environment more effectively and productively. Therefore, for teachers to be computer literate in all

departments in the faculties of education in Turkey started to offer two technology training must courses starting from 1998-1999 academic year. These courses are 'Computer Applications in Education' and 'Instructional Technologies and Material Preparation'.

As Turkish Council of Higher Education noticed that it is not enough to establish computer labs and electronic classrooms in the schools for integrating technology in the educational system. In order to use the technology in classrooms teachers must be aware of technology and uses of technology in their classrooms. Especially, in English language education, teachers need training in the use of technology (Mielke & Flores, 1992, cited in Padron & Waxman, 1996). Results of the studies of Padron (1993) and Liao (1993) stress that if preservice and inservice teachers are able to use variety of computers and different kind of applications, then they will be more comfortable to use computers in their classroom settings (cited in Padron & Waxman, 1996).

Instructional technology improves student achievement when integrated into K-12 education. However, for this improvement to occur, teachers must be familiar with computers, have positive attitudes towards computers, be comfortable with the technology and be able to use it effectively. Especially, experienced teachers have difficulty in finding effective uses of computers in their classrooms (Rakes & Casey, 2002).

Computers made preparation of appropriate learning environments for the learners possible. Therefore, teacher candidates in universities and already working teachers have to be aware of the new technologies and abilities to use them (Akpınar, 1999). When

teachers are familiar with the different uses of technology, then they will use it in their classrooms. Moreover, in their pre-service education, the more they use computers and different kind of computer applications, the more they will have positive attitudes towards computers. Akbaba and Kurubacak (1998) concluded in their study that elementary school teachers have positive attitudes towards technology.

Today, most of the schools are equipped with several technologies, especially with computers over the past decade. At any levels of the education, technologies such as multimedia, internet, intranet, etc. have important roles and used for different purposes (Akbaba & Kurubacak). Moreover, there is an increasing trend in the use of computers in every area of education. “Especially thousands of researches done to prove that the use of computers in learning environments is more effective than books, films, teachers and other traditional methods” (Alessi & Trollip, 2001, p.5). Besides, Kidd (1989) clearly pointed out that computer’s useful capabilities in learning process widely accepted. It is important to use the potential of computers by creating several applications. Liu, Moore, Graham and Lee (2003) stated that most of the researches support the idea that use of computers in learning environment enhances teaching and learning. Multimedia and internet used widely and there are various forms of distance learning. Use of computers as tools to support language learning environment get an attention both from educators and learners.

Computer-based instruction is potentially effective in most educational settings. Moreover, it is important to decide at which grade level use of computers is the most effective. According to the Robley’s (1989) study, effectiveness of computer based

instruction is significant at all grades levels, however, findings can not be used in favor of any particular level.

It is important to integrate technology in educational settings in order to enhance learning, moreover, the quality of the material that is going to be used must be carefully designed and developed. Web sites that are prepared to support for the classroom instruction will be helpful to the students if they include:

- “Lesson summaries and educational games that aim subject repetition,
- Asking some questions about the lesson topic,
- Enables students to evaluate themselves with short quizzes” (Akkoyunlu, 1999, p.81).

Ağır, Sütçü and Sarı (2001) found some interesting results in their study which was about elementary students views of education over the internet. This study showed that 75% of the students see internet as a school and 32% of the students see internet as a library. Today’s children know the value of technology, and they use it in every area of their life. Moreover, they are aware of the potential of computers in their education. As it can be seen from the result of Ağır et al., most of the students see internet as an information source.

Ağır et al. (2001) study investigated students’ opinions about the courses that they are taking can be learned over the internet or not. Some interesting conclusions were drawn from their study such as 80% of the students thought that “Social Science” course can be learned from the internet, their second choice was “Science” course with 75% and their third choice was “Computer” course and their fourth choice was “English” course with 70%. Ağır et al. also investigated students’ attitudes towards internet. 52% of the students think that they want to learn English from internet. Ağır et al. focused on the

question whether replacing classroom environment with internet environment or not. However, internet environment can be more effective when used as supplementary to the classroom environment.

2.2 Computer-Assisted Language Learning (CALL)

With today's technology, computers are used for several purposes. They replace some old technologies. Digital slides replaced acetates, data show projector replaced overhead projector, and computer laboratories now replaced language laboratories. Now, equipped computer laboratories can handle all requirements of language laboratories. Huebener (1960) gave advantages of the language laboratory, which can be said for computer laboratories, too.

1. All objectives of a language course can be achieved in the laboratory: speaking, understanding, pronouncing, learning vocabulary, carrying on a conversation, memorizing, reading and dictation.
2. The near-ideal pronunciation of native speakers is always available in the laboratory.
3. The student becomes readily accustomed to different kinds of voices. In the conventional classroom he hears only his teacher's voice.
4. In the laboratory the student can listen over and over again.
5. The laboratory gives every student an opportunity to practice individually during the whole period.
6. By constant repetition and oral drill the student acquires with ease a new set of speech habits- the real objective of learning a foreign language. (p. 112)

When developing an application for learners, there is a procedure that should be followed. Higgins and Johns (1984) described the commonly used drill-and-practice structure as:

1. Select task or question
2. display question
3. accept student's answer
4. match answer against acceptable answer(s)

5. report success or failure
6. adjust student's running score
7. return to (1) (p.39)

When the students are with less proficiency level, the content and the supporting material for the lessons must be carefully investigated. Therefore, the teacher must organize the supporting material for his or her lessons. Brandl (2002) states that “by pre-selecting and preparing the readings, the instructor tailors the contents and tasks to the students’ proficiency level” (p.90) and concludes that learners at the beginning or intermediate level, teacher-facilitated approaches has the highest potential.

2.2.1 History of CALL

In his book Levy (1997) summarizes the historical development of CALL in major periods and with important projects. The first application of computer-assisted instruction was programmed instruction. Actually, programmed instruction was the grandfather of the learning theory for computer environments. The studies of the B.F. Skinner were the most interesting studies which ground the behaviorist theory and guided many researchers.

The starting point of CALL can be traced to the PLATO (Programmed Logic for Automatic Teaching Operations) Project which was initiated at the University of Illinois in 1960 (Levy, 1997; Ahmad, Corbett, Rogers and Sussex, 1989). PLATO was aimed to provide interactive materials and let the learners to work with their own pace. It had a simple e-mail system that the learners post messages to the teacher. This system gives the opportunity of communicating between the teacher and the learners. Moreover, in

the PLATO, information about learners and learners' records are kept. Reading, writing and listening are the general examples of CALL materials for foreign language.

In 1970's with the humanistic methods studies focused more deeply on language learning and teaching, and the needs of the individual learner that is emotions and feelings. As Nunan (1988) stated that in 1970's, there is a tendency from teacher centered to learner centered methodology, especially the "individualization of the learning process" became the focus point in language learning (cited in Cecchetto and Stroinska, 1989). Besides, communicative language teaching emerged (Hoven, 1999). After the invention of microcomputer in 1973, special interest in CALL increased and software for CALL produced. Another great project was the TICCIT (Time-shared, Interactive, Computer Controlled Information Television) started in 1971. TICCIT was designed to use television and computer technologies together. It can be thought as the first CAI example by combining text, audio and video. In later versions of TICCIT named as MicroTICCIT enabled the learners to choose the context and the presentation of context that is different from the PLATO. Learner control became more important.

Educational Testing Service (1978, cited in Levy, 1997) evaluated PLATO and TICCIT projects, and concluded that PLATO Project didn't show any significant positive or negative effect on learners' achievement although it appealed both teachers and students. On the other hand, in the TICCIT Project there was a significant positive improvement on the learners' achievement. However, it was interesting that in TICCIT dropout rate was higher.

In early 1980's microcomputers became widespread and cheap, therefore teacher-programmers started to produce CALL software especially using BASIC programming language. Storyboard was a well-known program of the 1980s which was written by John Higgins. This program aims to reconstruct a text from a wide range of clues such as introductory materials and textual clues. In 1983, an eight –year research called Project Athena was established by the Massachusetts Institute of Technology (MIT) with funding of \$50 million dollars. Within this project Athena Language Learning Project (ALLP) was established and mainly concentrated on creation of communication-based prototypes for various courses such as French, German and English as a Second Language. ALLP consisted of multimedia authoring environments, hypertext and hypermedia systems, artificial intelligence techniques and simulations as language learning materials.

In 1990's internet was the most important technologic development that brought many features with it. With the rapid development of internet, multimedia materials such as text, sound and video became widely used. CALL projects also started to use internet in different ways. CAMILLE (Computer-Aided Multimedia Interactive Language Learning) was started by participation of France, Spain, Netherlands and UK. The main purpose of the project was to give basic courses for Spanish and Dutch, advanced courses in English and French. In CAMILLE project the learning environment is in the center of the design. Learning is more important than teaching. Therefore, it provides tools to facilitate learning. These tools include learning activities, pronunciation of the words spoken by a native speaker in a dictionary, audio and video recordings and etc.

Another project was OLA (Oral Language Archive) started in 1994 at Carnegie Mellon University. Primary purpose of this project was to provide digitized sound recordings for foreign language learning over the internet. French, German, Japanese, Russian, Spanish were the main languages included in the project.

A historical perspective for CALL is summarized above from the book of Levy (1997). Now, most of the studies focus on questioning how technology can be used more effectively in learning environments rather than questioning can technology place in learning environments. Harrell (1999) concluded that with carefully designed Computer Assisted Language Learning software, all the functions in a traditional classroom teaching situation, except for the actual physical contact, may be simulated by way of telecommunication technologies, creating a virtual classroom electronically.

2.2.2 Vocabulary Learning in CALL

Wilkins (1974) stated the importance vocabulary and indicated that vocabulary is important as much as grammar and must be mastered in order to have knowledge of a language. Paulston (1976) and Kidd (1989) stated that for language teaching and learning the study of vocabulary is very important area, however it is the most neglected one or left to initiative of the student. Paulston stated that the purpose of teaching vocabulary is preparing students to recall and use words in communications. Ertaş (1999) defined the use of words in appropriate situations as production of vocabulary. When vocabulary learning is considered, providing different kinds of practice environment for students become central issue. Teachers use classroom activities, games and role playing activities to facilitate classroom instruction. Now, computers play a great role in creating activities and practice environments to learners. Gillespie and

McKee (1999) suggested that if computer programs going to be used within a computer based learning environment, they should give concentration on specific language skills, especially which can be helpful to develop language awareness such as translation and vocabulary acquisition.

When the teacher's role changes to facilitator (Higgins and Johns, 1984) or advisor in a multimedia environment (Liu et al., 2003), it is important for the teacher to create attractive, interesting and enjoyable learning environments where students motivated to learn a language. As Jones and Fortescue (1991) expressed that computerized activity is different from the non-computer version. Computer makes a chance which is motivates students. It is obvious that attractive exercises get attention of the students. However, it shouldn't be forgotten that while creating activities for the students, the objective of the exercise must be clear in teacher's mind. Guberman (1989) concluded that students should be guided to produce meaningful sentences and messages. Therefore, he stated that it is necessary for the students to completely focus on the gist of the exercise that is meaning and spelling of terms. Therefore, teacher should prepare activities that are focusing on the desired language skills. Besides, students should be aware of what are they doing (Bayyurt & Kitaph, 1999), as Şire (1999) found that successful students aware of their responsibilities and have a tendency to practice English.

Activities are created for vocabulary learning aiming to provide opportunity to learners for practicing the vocabulary. Jones and Fortescue (1991), Kidd (1989) indicated the difficulty of teaching and learning vocabulary and stated that vocabulary learning often neglected. However, vocabulary is a very important area of learning a foreign language. The classroom teacher (personal communications, March 18, 2003) also indicated that

students usually don't pay attention to vocabulary learning. Moreover, they do not know how to study vocabulary. Therefore, it is important for the teacher to create environment for students to practice vocabulary. Higgins and Johns (1984) stated that the strength of learning is related to number repetitions. However, rote memorization is not very attractive for learners and is not an effective learning strategy. Therefore, learners neglect studying vocabulary, and it become teacher's responsibility create practice environments for learners. Sariçoban (1999) stressed that it is necessary to have or create environment convenient to activities that will help learners to develop determined skills. He recommended that activities should support practice, and autonomous learning should be emphasized.

When presenting new vocabulary items some techniques and approaches are used. Gairns and Redman (1986, cited in Ertaş, 1999, p.190) outlined the techniques and approaches as:

1. Traditional approaches
 - A. Visual techniques
 - a. visuals
 - b. mime and gesture
 - B. Verbal techniques
 - a. Illustrative situations
 - b. Synonym and definitions
 - c. Contrasts and opposites
 - d. Scales
 - e. Examples of type
 - C. Translation
2. Student-centered learning
 - A. Asking others
 - B. Using dictionary
 - C. Guessing from context

Ertaş (1999) conducted a study on 5th grade students aiming to find whether traditional methods or student-centered methods are effective in teaching new vocabulary. The

study of Ertaş, consisting of 12 teachers who were teaching at 5th grade, revealed that teachers use “synonymy and definition” technique mostly and “scales” to be the least used. Totally, 58% of the teachers generally preferred traditional techniques, 42% of the teachers used student-centered or both.

The study of Ritter (1993) revealed that 92% of the learners participated in his study preferred learning new vocabulary using a computer program. Students were asked to give reason for choosing studying vocabulary in front of computers. Most of the students thought that it was funny and 88% of them thought that it was good than working in traditional methods (cited in Liu et al., 2003).

Teachers mainly prepare classroom activities for learners to practice. Games are the most used activities used by the teachers to enhance classroom instruction. Games can be used for several purposes in teaching a foreign language. In her study Keskil (1999) gave the advantages of using games in the foreign language classroom.

- games are activities that promote learning through pleasure (Argondizzo, 1992, cited in Keskil, p.79),
- games can lower anxiety and can thus make acquisition of input more likely (Richard-Amato, 1996, cited in Keskil, p.79),
- games are highly motivating, relevant interesting and comprehensible (Richard-Amato, 1996, cited in Keskil, p.79),
- games can be used to a) develop and reinforce concepts (eg., colors, shapes, word definitions) b) to add diversion to the regular classroom activities c) to introduce new ideas d) to practice communication skills (Richard-Amato, 1996, cited in Keskil, p.79).

Several kinds of activities and games can be used for different purposes. Keskil (1999) gave a puzzle example that can be used in language classroom. She uses picture puzzle to teach vocabulary. She stated that such an activity can help learners in writing and

spelling. She concluded that different variations of puzzle such as dictating words can be also used.

Bayyurt and Kitaplı (1999) found that there is a problem when students don't understand the purposes of the activities. Therefore, classroom activities should be explained to all students. The purposes of the activities should be clear to students because students and teachers have different expectations from teaching and learning activities.

The study of McCreesh (1989) resulted that the students who spent more time with computers thought that computers can replace a teacher. It was also reported that when the learners participated both classroom sessions and computer labs get higher grades in phrasal verbs and vocabulary. Therefore, for vocabulary learning it is important to supplement classroom teaching with an appropriate practice environment.

2.2.3 Communication in CALL

Yavuz (1999) stated the focus given on communicative competence in foreign language teaching and learning process. Carel (1997) explained the recent developments in foreign language education in terms of communicative competence and concluded that learners were expected to interpret and product meaning properly in the context of target language and culture. Other researches also give considerable credit to interaction with the native speakers for second language learning environments (Toyoda & Harrison, 2002). Living in the target language community is the best way to learn a language; this means being in constant contact with the target language can be the best way to learn a foreign language. However, it is not always possible to live in target

culture, and then in classroom situation target language is used whenever there is a practicable environment; the real daily experiences of the target language simulated (Mitterer, Marini, MacRae, & Joe, 1989). Difficulties in experiencing with the target language context and lack of full access to the target culture squeezed teachers between textbooks and classroom materials. Most of the traditional materials are linear and not interactive enough to support an environment for improving skills for communicative competence. On the other hand, uses of hypermedia/multimedia technologies can support more appropriate context for students in terms of experiencing in the target language.

Communication is the key concept in teaching and learning a foreign language (Wilkins, 1974). Communication of meaning is at the heart of language learning (Elyıldırım, 1999), so most of the foreign language teaching/learning strategies depend on communicative basics. American Council on the Teaching of Foreign Languages (ACTFL, 1999) states the importance of communication in their report named Standards for Foreign Language Learning by saying that “communication is at the heart of second language study, whether the communication takes place face-to-face, in writing, or across centuries through the reading of literature.” (p.2). Report continues with explanations to communication standards with several examples. First standard is concerned mainly with the learners’ interpersonal communication skills with whom they are in personal contact. The sample for the 8th grade about this standard is explained as:

“Students exchange information about personal events, memorable experiences, and other school subjects with peers and/or members of target cultures.” (ACTFL, 1999, p.2)

The next standard is about comprehending written and spoken language on a variety of topics. Learners should easily understand materials which come from their common culture and related to their common interests and result in successful comprehension. (ACTFL, 1999).

In Turkey, Ministry of National Education published the regulations related with the skills that are nearly same for all different kind of schools;

- understanding what is said in normal speed,
- speaking intelligibly,
- comprehending a text with silent and loud reading,
- expressing the feelings, thoughts, and impressions in written form (p.262, Sariçoban, 1999).

On the other hand, the study of Budak (1992, cited in Sariçoban) revealed the priority given to four basic skills by the language teachers in Turkey as;

- reading a text,
- understanding what is said
- expressing his idea orally
- expressing his idea in a written form (p.260).

Liu, Moore, Graham and Lee (2003) clearly stated that there are several tools such as e-mail, chat, bulletin boards, etc. used in second and foreign language learning. Especially for communicative language skills to be enhanced by e-mail and chat can be used effectively. Moreover, e-mail and chat enable collaborative work, sharing and critical thinking. Moreover, study of Lam (2000) which was a case study consisted of e-mail messages, online exchanges and discussions on the web. It was concluded that technology is a very useful tool in promoting writing skills.

Cecchetto and Stoinska (1989) discussed the classroom environment with the computer environment for second language learning. They gave some credit to classroom

environment that the learners are motivated to success because of some reasons such as in front of their peers they want to be successful, so they will get higher marks. However, they also stated that sometimes this type of tension became a stress for the learners. In such situations, students won't respond. For the students who feel freeze in front of the teacher, computers creates an ideal environment. Liu et al. (2003) also supports this idea by saying that CMC provides students equal chance of participation when compared with classroom environment or face-to-face activities. Therefore, computer environment can be thought as an ideal environment for the students to express their ideas without anxiety, and with equal chance of participation when compared with classroom environment.

Sotillo (2000) stated that instantaneous interaction on a LAN (Local Area Network) is very exiting considering the computer-mediated communication. She continued that "electronic discussion encourages learners to construct knowledge cooperatively" (p.83). Chat gives an environment which enable instant online interaction. In chat environment students write their ideas and feelings about the subject being discussed. First of all they share their ideas in a written form, and they produce meaningful communication.

There is another advantage of online communication. Computerized applications can help us to record user actions. All the writings and actions can be recorded with a well designed online communication such as forum, chat, etc. When reviewing for CALL studies on negotiation of meaning, Toyoda and Harrison (2002) pointed the advantage of saved communication logs that can be in class learning materials. Moreover, these logs can be precious resources for enhancement of the learners' inter-language (Blake, 2000).

Chapelle (1997) suggested several suggestions on CALL activities, especially in communicative context. She put the emphasis on that CALL activities should offer opportunities for students to express themselves. Therefore, CALL activities must require learners to produce linguistic output. She gave three research examples on CALL activities, one of which was about electronic discussion. In this study, students were attending two class hours in a week and one laboratory hour. Students were given a story which they expected to read before coming to lab session. When they logged in they received instructor's questions about the topic and then they began to electronic discussion in written format (Kelm, 1992, cited in Chapelle, 1997).

Based on her review of literature, Chapelle (1997) suggested that there is a need for descriptive research that documents the nature of the interaction that the learners engage in within various CALL contexts. Therefore, it is important for researchers to create different computer applications for second or foreign languages.

2.2.4 Listening and Pronunciation in CALL

Listening, speaking, reading and writing are the four necessary skills of a foreign language (Grittner, 1969; Wilkins, 1974; Paulston, 1976; Carrell, Devine and Eskey, 1990; Şire, 1999; Sarıçoban, 1999). In a communicative context we use mainly listening and speaking abilities with our vocabulary. Carrell et al. gave considerable credit to listening over reading and speaking over writing. All over these abilities, listening is the most necessary part of communicating in any language (Grittner, 1969). Macy & Feyten (2002) explains the importance of listening ability by stressing that listening ability is very essential in language learning. Moreover, listening ability is the most used language skill among speaking, reading and writing.

Courtright and Wesolek (2001) gave a great value to pronunciation of the new words learned by all levels but especially by elementary level learners. They emphasized that when vocabulary instruction is concerned; showing the relation between the new word learnt and the pronunciation of the word is very considerable for language learning. They concluded that for a good vocabulary acquisition it is important to give an opportunity for learners to hear when they see new vocabulary.

Paulston (1976) stated that in language learning acquiring a good pronunciation is the most difficult task. It is clear that after some age, it becomes difficult to pronounce like a native. Therefore, it should be given a great importance to help young learners to acquire a good pronunciation. Moreover, Paulston strongly explained that for children learning pronunciation occurs by imitation and concluded that for teaching pronunciation there are four steps to be followed. These steps are:

1. selection and presentation of the sound feature to be thought
2. recognition of the new sound and discrimination between similar sounds
3. production of the sound feature, first in words and phrases and finally
4. production of the sound feature in a communicative situation (Paulston, 1976, p.94).

According to Liu Moore Graham and Lee (2003) there were several software tools that are aiming to support specific skill acquisition. Researches investigated software which mostly focused on reading and writing skills. However, “the literature seems to indicate that the greatest need for software development is in the areas of listening and speaking, because these two areas were found to be sparsely represented.” (p.253).

There are some researches focused on listening and speaking skills. For example, the study of Higgins (1989) revealed some information about pronunciation and phonetics.

He indicated his experiences that the computer is already turning the whole area of pronunciation and phonetics into a more experimental subject, allowing students to look at sounds as well as they hear it, and to get rid of some of their preconceptions about, for instance, sounds and spellings.

For CALL exercises speech technology can offer several kinds of environments. One example is sound discrimination. In foreign language learning pronouncing and understanding the discriminations of some words are difficult (Wilkins, 1974). For example, English “r” and “w” are difficult to distinguish for the non-native speakers. Another example is giving the words pronunciations which may be used for dictation exercises. (Ahmad, Corbett, Rogers, & Sussex, 1989)

Demirezen (1999) pointed an important problem in teaching foreign languages. He calls the problem as “foreign accent problem” and defined it as transferring the articulation habits involved in mother tongue to pronunciation of the target language. Of course this transfer occurs in a non-native foreign language speaker’s pronunciation. Demirezen continued that the ideal is pronouncing the standard English with a native-like competence and fluency. He stressed that students are affected by the foreign accent of the teacher. Therefore, “students have a general tendency to hear the sounds of the target language in terms of their mother tongue” (p.174). Because of this reason, many students have difficulties in understanding normal spoken English while listening. Finally, he concluded that in order to refine pronunciation and listening comprehension, native sounds should be listened that is video cassettes, audio cassettes, films, and TV can be used.

Liu et al. stated that for speech recognition it is not very feasible to use it in second language learning because today's technology is not able to give reliable feedbacks to a given input. Therefore, in order to use speech recognition in second language learning, the development of the technology in the area of recognition must be waited. On the other side there are several research focused on listening. Brett (1997) found that using multimedia technology promotes listening skills in effective ways (cited in Liu et al. 2003). Jacobsdottir and Hooper (1995) concluded that listening skills acquired effectively when students given text with spoken words (cited in Liu et al. 2003).

2.3 MS-Agent Technology

Rickenberg and Reeves (2000) studied on animated characters on anxiety, task performance and evaluations of user interfaces. They conducted their research in three dimensions: "no character, a character that ignored the user and a character that closely monitored work on the web site" (p.49). They used Microsoft Agent technology for their study. Their study showed that animated character that monitors the users closely, users feel anxious and their performance was decreased when compared to no character and character that ignored the user. Study also described that users with high internal locus of control showed significantly less anxiety, more performance than users with high external locus of control. Besides all, their study relies on animated character's directly watching the user actions and recording the user interactions. They concluded their research with a soft conclusion that it is the character's actions such as "what it does, what it says and how it presents itself" (p.55) that has effect on user behavior.

2.4 Summary

Uses of technology especially computers and internet in every area of education is enhances learning environments. Several researches conducted in order to prove effectiveness of computers in different areas. Today, computers are accepted to be effective tools by most of the researchers and educators. Such a result also directed governments to invest on uses of technology in every area of social life especially in education. Necessary budgets are reserved to equip schools with several kinds of technologies. Also teacher preparation programs in the universities redesigned in order to prepare technology aware teachers. Tomorrows teachers will be expected to follow and use technological developments in their classrooms.

Now, studies focus in what situations use of technology is effective. Therefore, it is important to research on effect of different uses of computers in different areas. Most of the studies are at the university level as expected. However, there is a need for research in lower grades especially at K-12 level.

Vocabulary learning is an important area in second language learning. The literature also gave considerable credit for vocabulary learning. However, most of the researchers express vocabulary learning actually to be the most neglected area. It is clear that teachers must create opportunities for learners to practice vocabulary. Using computers in creating practice environments for learners found to be effective. Especially, computerized exercises said to be both attractive and exiting for young learners.

Communication is said to be a very important concept in second language learning. Interaction with native speakers in target culture discussed to be the most effective in

terms of second or foreign language learning. However, literature also explains the difficulties of experiencing in the target culture. Therefore, some alternatives were given. Online communication is said to be effective both in terms of communicative language and writing. Especially chat found to be effective in promoting collaborative work and critical thinking.

For second language learning, most of the studies focused on primarily reading and writing skills. However, listening is also an important aspect in language learning. Moreover, it is expressed that there is a need for developing applications for listening and pronunciation. The advantages of speech technologies also expressed in different ways. It is stated that giving learners the opportunity of listening the words can enhance students listening skill.

CHAPTER 3

METHODOLOGY

In this chapter, the subjects and the context of the study within the framework of the overall design of the study will be presented. The research questions, the research design, the web-based learning tool, the participants, the instruments, the data collection procedures, the data analysis procedure, the assumptions and the limitations of the study will be described.

3.1 Research Questions

The purpose of this research is to investigate the web-based learning tool in terms of students' perceptions and the teacher's perception at elementary level ESL instruction.

This study tries to answer the following main and sub questions:

1. What are the students' and teacher's perceptions about the web-based learning tool in terms of vocabulary learning?
 - a. What are the students' and teacher's perceptions about the dictionary page in terms of vocabulary learning?
 - b. What are the students' and teacher's perceptions about activities page in terms of vocabulary learning?

2. What are the students' and teacher's perceptions about the web-based learning tool in terms of hearsay?
 - a. What are the students' and teacher's perceptions about dictionary page in terms of hearsay?
 - b. What are the students' and teacher's perceptions about chat page in terms of hearsay?
3. What are the students' and teacher's perceptions about the web-based learning tool in terms of communication?
4. What problems do students face while using the web-based learning tool?
 - a. What problems do students face during using dictionary page of the site?
 - b. What problems do students face during using activities page of the site?
 - c. What problems do students face during using chat page of the site?
5. How should the web-based learning tool be improved to be more effective?
 - a. How should dictionary page be improved to be more effective?
 - b. How should activities page be improved to be more effective?
 - c. How should chat page be improved to be more effective?
6. What are the students' and teacher's perceptions about the internet character used in the web-based learning tool?

3.2 Design of the Study

This study is descriptive study, which was conducted with 8th grade students at the METU College. The English course is carried with eight lecture sessions in a week and one laboratory session for a unit. However, not all the English language teachers have to conduct laboratory sessions, it depends on the teacher whether perform laboratory activities or not. Lectures sessions were carried out in the classroom settings with mostly

traditional methods. Laboratory sessions were carried out for giving an opportunity to students to practice the unit content in an attractive environment. In the laboratory sessions there were one subject area teacher (i.e., English language teacher) and one IT specialist who solves probable computer problems and help students in case they face any problems.

The researcher developed a supplementary web site (web-based learning tool) specifically for the English course given as a second language. The web-based learning tool was used during two laboratory sessions of “Superstars” unit of the course. All of the content of the tool was created by the teacher.

The purpose of this study is to investigate the web-based learning tool in terms of students’ and the teacher’s perceptions. One week before the laboratory session, computer attitude scale (CAS) was given to the students to get the idea of their attitudes towards computers. Just after the treatment, student perceptions questionnaire were given which was developed by the researcher. An interview was also conducted with the course teacher one week after the treatment. Quantitative methods used to gather and analyze students’ attitudes towards computers and perceptions about the web-based learning tool. Qualitative methods used to gather and analyze the teacher’s perception.

3.3 Web-based Learning Tool

The web site was designed considering the needs of the teacher and the course. In the development process of the web site two meetings were conducted with the content area teacher and the computer teacher. As Kidd (1980) stated that “in order to produce effective programs teachers must involve in the creation and development stages of the

production” (p.70). First meeting was about the needs of the course and the site design discussed with the content area teacher. During the meeting, the researcher introduced the teacher with the Ms-Agent technology and its properties that may be used in language education. As a result of this meeting, the teacher and the researcher decided to use Ms-agent technology in the web-based learning tool. It was used pronunciation of the words in dictionary page and to give opportunity to students to hear what they write in the chat page.

The teacher wanted to include an environment for vocabulary learning. First of all, the teacher stated that a dictionary page should exist for the students to see the unit words and go over the meanings of the words. The dictionary page was created on the basis of giving English meaning of the word. Actually, teacher did not require any visual clues for the words considering the grade level of the students.

As previously stated, it was decided by the teacher and the researcher to give an opportunity for students to hear the pronunciation of the words. Therefore, in the dictionary page, the pronunciation of the each word was provided with a button. When a student clicked any of the pronounce button on the page Ms-Agent character reads the word. Figure 3.1 shows a sample page of the dictionary page.

Words	Explanation	Pronounce
ADMIT	to accept	<input type="button" value="Pronounce"/>
BEAT	to defeat your opponent	<input type="button" value="Pronounce"/>
EARN	to get BEAT	<input type="button" value="Pronounce"/>
EVIL	bad	<input type="button" value="Pronounce"/>
FAMOUS	known by a lot of people	<input type="button" value="Pronounce"/>
FAN	the person who likes/admires a particular thing or person	<input type="button" value="Pronounce"/>
GAIN	to get something or valuable	<input type="button" value="Pronounce"/>
PICK	to choose	<input type="button" value="Pronounce"/>

Figure 3.1 – Dictionary Page of the Web-based Learning Tool.

The teacher expressed that for vocabulary learning to be effective practicing is required and very important. Therefore, there should be an environment for the students to practice the unit words. The teacher proposed an activities page that enables students to practice the words of the unit. Crossword puzzle selected as the main activity for this unit. Three crossword puzzles created, each of one consists of an average of five words. Figure 3.2 shows a sample crossword puzzle from the activities page.

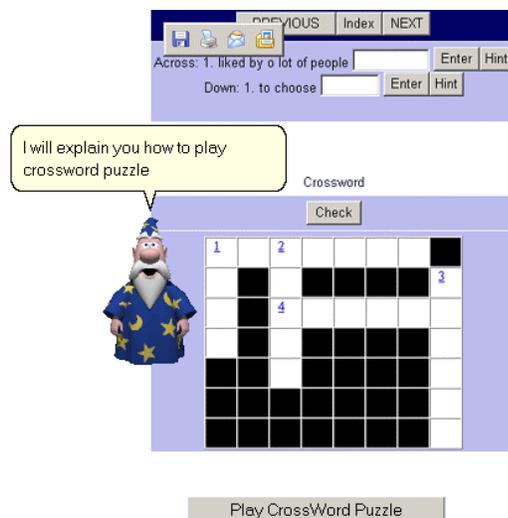


Figure 3.2 – Activities Page of the Web-based Learning Tool.

It was considered that an online communication environment might be interesting for students. Therefore, an online communication environment created for students. The teacher want to use chat environment to see students' instant writings in terms of grammar and students' usage of vocabulary of the unit in an appropriate way. Moreover, it was expected that students will participate more than class discussions. Figure 3.3 shows the chat page.

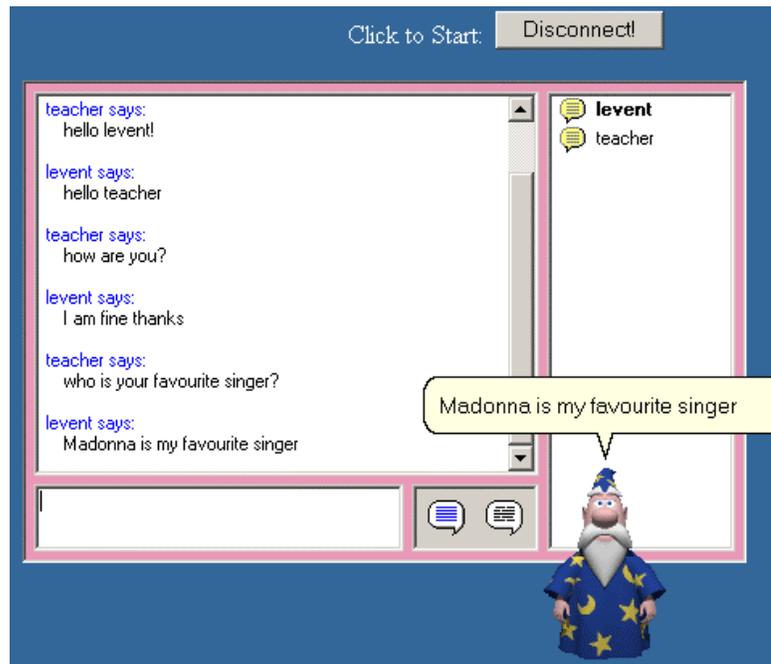


Figure 3.3 – Chat Page of the Web-based Learning Tool.

In the second meeting, after the researcher developed the web-based learning tool, the teacher used the tool. According to her evaluation of the tool, the researcher made the necessary modifications and finalized the web-based learning tool. Sample pages of the web-based learning tool are shown in Appendix D.

3.4 Participants

The participants of this study were eight grade students who are attending METU College in 2002-2003 school year. Class 8-D was selected for this study. Class 8-D had 28 students; however everyday two of the students were on school duty, therefore, perceptions questionnaire was completed by 24 students. Computer attitude scale questionnaire was completed by 22 students. Therefore, only the 22 students' data was used in this study. 12 of the participants were female and 10 of them were male.

Students' native language was Turkish. The students took the computer literacy courses between 1st and 5th grades. After 5th grade, students generally attend computer-assisted courses in the laboratories.

3.5 Instruments

Three instruments were used to collect the data during this study. In order to obtain students' attitudes towards computer: Computer Attitude Scale (CAS), to obtain students' perceptions about the web-based learning tool: Students' Perceptions about the Web-based Learning Tool Questionnaire (SPWLT-Q) and to obtain teacher's perception about the web-based learning tool: Teacher's Perception about the Web-based Learning Tool Interview (TPWLT-I) instruments were used.

3.5.1 Computer Attitude Scale

One week before the application of the web-based learning tool, students were given the CAS, Computer Attitude Scale (Appendix A). This scale consists of 40 questions and developed by Loyd and Gressard (1984) as a Likert-type instrument. The CAS

consisted of four sub-scales, each consisting of 10 items, which are: a) confidence, b) liking, c) anxiety, d) usefulness (Knezek and Christensen, 2000). Berberoğlu and Çalikoğlu (1992) translated the CAS into Turkish and found the reliability coefficient alpha to be 0.90. The CAS items were Likert type four scaled, where 4 representing 'strongly agree' and 1 representing 'strongly disagree'. Negative items were coded reversely, where 4 representing 'strongly disagree' and 1 representing 'strongly agree'. For this study, the reliability coefficient alpha was found to be 0.90.

3.5.2 Students' Perceptions about the Web-based Learning Tool Questionnaire

This questionnaire was the main data source to get students perceptions about the web-based learning tool (Appendix B). Students' perceptions about the web-based learning tool questionnaire developed by the researcher specifically for this study. The language of the questionnaire was in Turkish, because the native language of the participants.

One test construction expert and two subject area experts examined the questionnaire to assure its accuracy, clarity and validity. According to the feedbacks, first three dictionary page related questions 'strongly agree' and 'strongly disagree' format changed to 'all of them' and 'none of them' format. Some questions were deleted and some negative items converted into positive, but some remained. The 5th chat page question which was a negative question coded reversely. The reliability coefficient of the 24 Likert type five scaled items was found to be 0.87.

The questionnaire consisted of four main categories which were a) dictionary page, b) activities page, c) chat page, and d) MS-Agent character. Dictionary page related

questions consisted of four sub-categories which are a) vocabulary learning, b) hearsay, c) problems, and d) expectations. Activities page related questions consisted of three sub-categories which are a) vocabulary learning, b) problems, and c) expectations. Chat page related questions consisted of four sub-categories which are a) hearsay, b) communication, c) problems, and d) expectations. MS-Agent character related questions consisted of three sub-categories a) prettiness, b) speech of the character, and c) functionality. Table 3.1 shows the four main categories with their corresponding sub-categories. The questionnaire had 24 five scaled Likert type items, where 5 representing ‘strongly agree’ and 1 representing ‘strongly disagree’, and 2 open ended questions for each category.

Table 3.1 – Students’ perceptions questionnaire main and sub-categories.

Dictionary Page	Activities Page	Chat Page	MS-Agent Character
Vocabulary learning	Vocabulary learning		Prettiness
Hearsay		Hearsay	Speech of the character
		Communication	Functionality
Problems	Problems	Problems	
Expectations	Expectations	Expectations	

3.5.2.1 Dictionary Page Related Questions

The dictionary page has two main purposes, one of them is helping the students in vocabulary learning and the other is helping students in acquiring hearsay. Dictionary page related questions consist of 7 Likert-type and two open ended questions. First three questions of the dictionary page category were about students’ usage of the

dictionary page. With the 1st question it was intended to explore that how many of the students listened to how many of the words. It was also aimed to understand the ratio between listened to the words count and the answers given for hearsay related question. The second question was asked in order to get the idea of how many of the students tried to repeat the words that they've heard the pronunciation of the words. It was also aimed to get an answer that whether the students tried to repeat the words exactly they've heard by the third question.

The 4th question was directly related with the students' perception about the dictionary page in terms of hearsay. What percent of the students thought that the dictionary page is helpful in acquiring hearsay? The 4th question was analyzed with the other dictionary page questions.

The 6th question was prepared for understanding the relation between the students' repetition of pronunciation of the words (2nd and 3rd questions), students' perception about hearsay and students' pronunciation experiences. Whether the students who tried to repeat the pronunciation of the words exactly, thought that they pronounced them better than their previous experiences. Moreover, whether the students who thought that they acquired hearsay through the dictionary page thought that they pronounced better or not.

The 5th question aimed to answer that do the students think that dictionary page can helped them in terms of vocabulary learning. Moreover, it aimed to represent the connection between the 5th question and the students' answers to 1st, 2nd and 4th questions.

The 7th item was to find out the students' understanding of dictionary page in terms of usefulness. If the students thought that the dictionary page was not useful, then he or she had some problems in using the dictionary page or his or hers expectations from the dictionary page was not satisfied. The 8th and 9th questions aimed to find out the problems that students were faced and what other things they want to see in the dictionary page. The 8th and 9th questions were open ended questions and they quantized to be more meaningful.

3.5.2.2 Activities Page Related Questions

Activities page's main function is to give opportunity for students to practice the vocabulary of the unit. One attractive method for practicing is playing games especially for young students. Therefore, students' perceptions about playing game and vocabulary learning via crossword puzzle analyzed together.

The 1st item aimed to find out that the students think that making practice via playing game is funny or not? The students' answers for this question probably affect the students' answers about vocabulary learning questions which are 2nd and 5th questions. The 2nd question was to find out whether the students thought that practicing by playing game helped them learning vocabulary easier. The 5th question was about the spelling of the words, does the crossword puzzle help the students in acquiring the spellings of the words.

The 3rd and 4th questions intended to answer the uses of activities page and dictionary page together. That is, whether the students used the dictionary page when they were

trouble in finding the answer in activities page. They also checked whether the students remember the meanings of the words from the dictionary page or not.

In activities page, 6th and 7th questions were about to finding out the problems that students faced while using the activities page. In addition to that what sort of activities they want to see in this page.

3.5.2.3 Chat Page Related Questions

Chat page was aimed to help the students in acquiring hearsay. However, there are some other factors that may have an effect on communication, and so in acquiring hearsay. Chat page related questions consist of 7 Likert-type and two open ended questions. There is a pre-question which was to identify the students pervious chat usage. Students were asked whether they used a chat environment like the web-based learning tool's chat environment.

The chat page related questions can be divided into 3 sub-groups. The first one is about students' comparison of chat environment with the classroom environment in terms of communication. The second sub-group is about students' perception about the chat page in terms of hearsay. And the last sub-group is about students problems with the chat page and their expectations.

1st question was about the students' comparison of chat environment with the classroom environment in terms of expressing themselves. 2nd question was to find out that whether the students feel freer of making mistakes in chat environment than classroom environment. These two questions aimed to discover that whether the

students feel comfortable in chat environment or not. Then the students' perception about chat page in terms of hearsay can be interpreted accurately. Whether the teacher made corrections on students' writings faster in chat environment than classroom environment was asked by the 6th question.

The 3rd question which is in second sub-group was to understand the students' perceptions about hearsay. The 3rd question was analyzed with the other chat page related questions together to get a clear understanding of the students' perception about hearsay.

The third sub-group of chat page related questions consisted of 4 questions. The 4th question tried to find out that whether the students have difficulty in following the writings in the chat. This may relate with the students' perceptions about hearsay. Moreover, it may reveal that the students have problems in using chat page or not. The 5th item shares the same purpose, too. If the students have problems in expressing themselves because of the environment of the chat page they may not thought that they acquired hearsay through the chat page. The 7th and 8th open ended questions were aimed to find out that are the students had problems other than the above two problems.

3.5.2.4 MS-Agent Character Related Questions

Questions about the Merlin character are the most important questions. Because, the students' perceptions about the Merlin character would probably have an effect on the students' answers for different questions in the questionnaire. First of all, it was asked in the 1st question whether the students found the Merlin character pretty or not. If they

were disturbed by the Merlin character then they would probably have negative perceptions about the web-based learning tool. Moreover, it is important that the students found the Merlin's pace of speech normal. If the pace of speech of the Merlin was not suitable for the students they may not find the dictionary page and the chat page effective in terms of acquiring hearsay. The 2nd question also was asked for the same reason. Besides these, the 3rd question was aiming the similar consideration that if the students didn't find the speech of Merlin understandable, they would probably not find the dictionary page and the chat page as effective in terms of hearsay.

The 3rd question also helped to explore whether the students found the explanations of Merlin character for each page was enough or not. It was important because it might an effect on the students' usage of the pages. The same consideration was also applicable to the 5th and 6th questions. If the students thought that the Merlin character helped them while surfing the pages, the probability of usefulness to the corresponding page would increase.

3.5.3 Interview on Teacher's Perception about the Web-based Learning Tool

The interview questions were mainly about the teacher's perception about the web-based learning tool (Appendix C). The 1st interview question intended to get the teacher's understanding of the dictionary page. Likely, the 2nd interview question aimed to find out what the teacher thought about activities page. The teacher especially was asked what she thought about the students' hearing of the pronunciation of the words. There were two questions were about the Merlin character. The specific questions were about the Merlin character's pace of speech and understandability by the students. There

were also specific questions about the chat page. And, the teacher was asked to compare classroom environment with the chat environment by means of participation, productivity and administration.

3.6 Data Collection Procedures

The data was collected from the students and the teacher through questionnaires and interview and through researcher observations. Quantitative and qualitative methods are used to collect data. Computer attitude scale was given one week before the treatment. At the end of the treatment, students' perceptions about the web-based learning tool questionnaire was given to the students. One week after the treatment, an interview conducted with the teacher to get teacher's perception about the web-based learning tool.

Time spent on the web-based learning tool was collected with the ASP technology. Just after the computer attitude scale administrated to the students, the researcher requested the class list from the teacher. The teacher supplied the Class 8-D class list containing, student ids, names and surnames. The researcher created user accounts according to student names. When students and the teacher logged into the site all actions were recorded to an Ms-Access database. Time spent on every page, all link clicks and whatever written in the chat environment were recorded.

3.7 Data Analysis Procedure

The computer attitude scale and the students' perceptions about the web-based learning tool questionnaires, which constitute quantitative data, were firstly coded and recorded in SPSS 10 (Statistical Package for Social Sciences). Frequencies, percentages, means

and standard deviations were used as statistical techniques. Miles and Huberman (1984, cited in Lancy, 1993) suggested that when a theme or pattern identified in a qualitative data, there is an important point to consider. That is a theme or pattern how many of times. Then quantifying the theme or pattern help us to understand the data more meaningfully. Therefore, the open ended questions in the students' perception about the web-based learning tool questionnaire first quantized and then presented. The interview with the teacher was semi-structured and it contains open ended questions. The interview with the teacher constitutes the qualitative data, which was transcribed carefully. Then, the main patterns related with the research questions were analyzed. Researcher observation was used to understand the students' use of site. Therefore, researcher mostly used watching and listening methods. Gillham (2000) stated the observation has three main elements which are:

Watching what people do,
Listening what they say,
Sometimes asking them clarifying questions (p.45).

3.8 Assumptions

1. All respondents gave accurate responses to the instruments used in this study.
2. Data was collected, recorded and analyzed accurately.

3.9 Limitations

1. This study is limited to 22, 8th grade students at METU College on the 2002-2003 spring semester.

2. This study is limited to content of the “Superstars” chapter, consisted of 19 words, of the English course given on the 2002-2003 spring semester in the METU College.
3. Validity of this study is limited to the reliability of the instruments used in this study.
4. Validity and reliability of this study is limited to the honesty of the participants’ responses to the instruments used in this study.

CHAPTER 4

RESULTS

In this chapter, detailed results of the characteristics of the participants, the students' attitudes toward computers, the students' perceptions about the web-based learning tool and the teacher's perception about the web-based learning tool will be presented. Descriptive statistics and frequency distributions were performed by using SPSS 10.

4.1 Characteristics of Participants

There are 12 female and 10 male students participated to the study. Most of the students stated that they had worked with computers more than one year. Only one student stated that she had worked with computers less than one week. Only 3 students which were female expressed that they had no experience with the computers. There are 5 students stated that they had attended private computer education programs rather than school's computer courses. Percentages of males, females, work time with computers and private computer education are presented in Table 4.1.

Table 4.1 – Characteristics of participants

	GENDER				TOTAL	
	Male		Female		N	%
	N	%	N	%		
Participated in the study	10	45.5	12	54.5	22	100
Attended private computer training program	3	13.6	2	9.0	5	22.6
Worked with computers more than one year	8	36.3	8	36.3	16	72.7
Worked with computers less than one week	–	–	1	4.5	1	4.5
No work experience with computers	–	–	3	13.6	3	13.6

4.2 Students' Attitudes Toward Computers

The computer attitude scale, which is four scaled, was administered to the students to get information about their attitudes towards computers. The sub-scale items of the computer attitude scale were analyzed in the categories of anxiety, liking, confidence and usefulness.

It is clearly seen that most of the students have positive attitudes towards computer. Nearly all of the students like computers and they are confident with computers. Most of the students thought that computer is a useful tool. Most of the students' attitudes towards computers are positive. Table 4.2 shows the detailed information about the sub-scale items' means and standard deviations.

Table 4.2 – Summary of sub-scales of the CAS

	Mean	SD	N
Anxiety	3.10	0.43	22
Liking	3.22	0.39	22
Confidence	3.19	0.54	22
Usefulness	3.03	0.41	22

4.3 Students' Perceptions about the Web-Based Learning Tool

Students' perceptions about the web-based learning tool are investigated in five main categories which are students' perceptions about vocabulary learning, hearsay, communication, the Merlin character and what problems students faced and students' expectations. Students' perceptions about vocabulary learning consist of two sub-categories: students' perceptions about the dictionary page and perceptions about the activities page. Students' perceptions about hearsay consist of two sub-categories: students' perceptions about the dictionary page and perceptions about the chat page. The students' perceptions about communication were investigated in chat page environment. The problems that students' faced while using the web-based learning tool and expectations from the corresponding pages consist of three sub-categories: the dictionary page problems and expectations, the activities page problems and expectations and the chat page problems and expectations. Students' perceptions about the Merlin character investigated in terms of liking, appropriateness of the speech of the character and functionality. Each of the 5 main categories will be presented in the following sections.

4.3.1 Students' Perceptions about the Web-based Learning Tool in Terms of Vocabulary Learning

Students' perceptions about vocabulary learning investigated in two dimensions. First dimension is the dictionary page. In the questionnaire, dictionary page related two questions were asked to the students about vocabulary learning. Second dimension is activities page. In the questionnaire activities page related five questions were asked to students about vocabulary learning.

4.3.1.1 Students' Perceptions about the Dictionary Page in Terms of Vocabulary Learning

The 5th and 7th questions of the dictionary page were about the students' perceptions about the dictionary page in terms of vocabulary learning. Students were asked whether dictionary page helped them in their vocabulary learning. The mean score was found to be 3.23 and nearly half of the students expressed that the dictionary page helped them in terms of vocabulary learning, that is 45.5% of the students found the dictionary page effective. On the other hand, 27.2% of the students thought that the dictionary page was not effective for them in terms of vocabulary learning. Undecided students were 27.3% of the class. Students were asked about usefulness of the dictionary page with the 7th question. Half of the students found the dictionary page useful, 28.6% of the students did not find the dictionary page useful with an overall mean score of 3.38. The detailed information is shown in Table 4.3.

Table 4.3 – Students' perceptions about the dictionary page in terms vocabulary learning

		SD % (N)	D % (N)	N % (N)	A % (N)	SA% (N)	Mean	St.Dev
Q.5	Dictionary page helped me to learn the words easily	13.6 (3)	13.6 (3)	27.3 (6)	18.2 (4)	27.3 (6)	3.23	1.31
Q.7	Dictionary page is useful.	4.5 (1)	22.7 (5)	18.2 (4)	18.2 (4)	31.8 (7)	3.38	1.20

Time spent in dictionary page investigated with students' perceptions about vocabulary learning. When time spent in dictionary page divided into two parts; for the upper part it can be clearly seen that students' perceptions about vocabulary learning became most stable. For the students who spent less time in dictionary page, there were different answers. The same relation is can be said for the 7th question, too. The students' answers

became more stable when students use of the dictionary page increases. The detailed information can be seen in Figure 4.1.

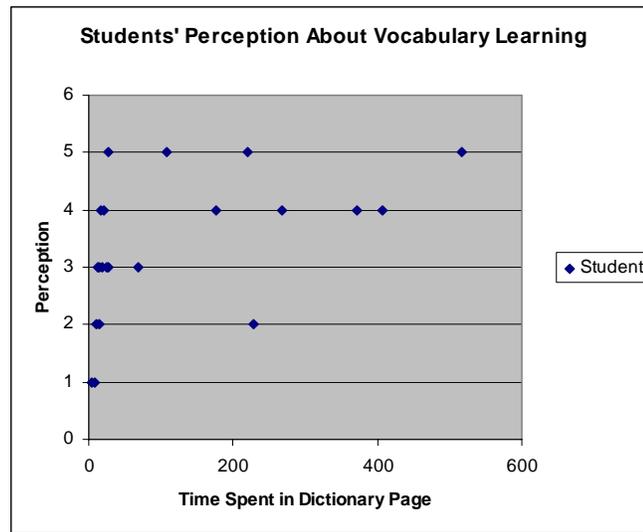


Figure 4.1 – Students’ perceptions about the vocabulary learning versus time spent in dictionary page

It was observed by the researcher that some of the students just skimmed the words and their meanings. But some students spent more time in dictionary page and go over the words and their meanings.

4.3.1.2 Students’ Perceptions about the Activities Page in Terms of Vocabulary Learning

The first five activities page questions were about the students’ perceptions about the activities page in terms of vocabulary learning. Students were asked that whether the activities page helped them in their vocabulary learning. Moreover, the students were asked to state that whether they had used the dictionary page and the activities page together.

The results of the 1st activities page question revealed that 72.7% of the students thought that practicing by playing game is funny, 9.1% of the students were disagree with the statement that practicing by playing game is funny. There are 3 students with percentage of 13.6 are unclear. The mean score for the 1st question was 4.19. It was observed that most of the students liked playing with the crossword puzzles.

The 2nd activities page question was about whether practicing by playing game is helpful in vocabulary learning. The mean was found to be 4.00 and 63.6% of the students thought that making practice by game playing is helpful to their vocabulary learning. Only 18.2% of the students disagree with it and 13.2% of them were undecided. When 2nd question investigated with the 1st question it is clearly seen that the students who thought that practicing by playing is funny, also thought that practicing by playing game helped them in their vocabulary learning. There is no relation determined between the time spent in activities page and students' perceptions about vocabulary learning. However, it was clearly seen from the researcher observations and the site logs that the students who spent more time in the first crossword puzzle finished the all of the crossword puzzles.

The 5th activities page question aimed to find answer to whether the crossword puzzle helped the students in terms of practicing the spelling of the dictionary words. The mean was found to be 3.45 and 50% percent of the students stated that the crossword puzzle was effective in terms of practicing the spelling of the words. Only 18.2% of the students stated that the crossword puzzle had no effect on improving their spelling of the words. It is interesting that there is a noticeable decrease in the students' answers to 5th question when compared with the 2nd question.

There were two questions which were related to students' use of activities page together with the dictionary page. Students were asked that did they remember the words from the dictionary page or did they use the dictionary page while solving the crossword puzzle by the 3rd and 4th questions. 50% of the students stated that they remembered the words from the dictionary page where 18.1% of the students disagree. There are also undecided students about 22.7% where the mean of the item was 3.65.

In the 4th question students were asked whether they had used the dictionary page when they didn't find the required word in the crossword puzzle. Only 40.9% of the students stated that they had used the dictionary page to find the required word. 8 students did not use the dictionary page when they were using activities page. The mean for this item was 3.10.

Explanations given for the activities page questions 1, 2, 3, 4, and 5 are explained in Table 4.4 for students' perceptions about the activities page.

Table 4.4 – Students' perceptions about the activities page in terms vocabulary learning

		SD % (N)	D % (N)	N % (N)	A % (N)	SA % (N)	Mean	St.Dev
Q.1	It was funny to make practice by playing game.	— (0)	9.1 (2)	13.6 (3)	22.7 (5)	50.0 (11)	4.19	1.03
Q.2	Making practices by playing game helped me in my vocabulary learning.	— (0)	18.2 (4)	13.6 (3)	13.6 (3)	50.0 (11)	4.00	1.22
Q.3	I remembered the words asked in crossword puzzle from the dictionary page.	4.5 (1)	13.6 (3)	22.7 (5)	18.2 (4)	31.8 (7)	3.65	1.27
Q.4	When I couldn't find a word in crossword puzzle, I used the dictionary page.	18.2 (4)	18.2 (4)	18.2 (4)	18.2 (4)	22.7 (5)	3.10	1.48
Q.5	Crossword puzzle helped me in making practice of the spelling of the words.	9.1 (2)	9.1 (2)	22.7 (5)	31.8 (7)	18.2 (4)	3.45	1.23

4.3.2 Students' Perceptions about the Web-based Learning Tool in Terms of Hearsay

Students were given the opportunity of listening the words or sentences in the web-based learning tool. In the dictionary page, students can hear the dictionary words and in the chat page students can listen whatever they wrote in the chat. Therefore, students' perceptions in terms of hearsay were investigated in two parts: dictionary page and chat page.

4.3.2.1 Students' Perceptions about the Dictionary Page in Terms of Hearsay

The first three questions about the dictionary page questions aimed to get students' usage of the dictionary page. Whether the students listened to the pronunciation of the words, and whether they tried to repeat what they hear. The other two questions were about hearsay, and, the dictionary page helped the students in terms of hearsay.

In order to get information about how many of the students listened to the number of words in the dictionary page, the 1st item in the questionnaire about the dictionary page was asked. With a mean of 3.50, 40.9% of the students stated that they had listened to all of the words in the dictionary page. 18.2% of the students listened to most of the words, 13.6% listened to half of the words, 4.5% of them listened to some of the words and 22.7% of the students stated that they didn't listen to the pronunciation of the words. The information about the 1st item is presented in Table 4.5.

Whether students repeated the pronunciation of the words was asked by the 2nd dictionary page question. It is interesting that although most of the students listened to the most of the words, 54.5% of the students did not repeat the pronunciations they heard and 27.3 of the students repeated some of the words. Only 9.1% of the students listened to all of the pronunciation of the words, and 4.5% of them listened to most of the words. Again 4.5% of the students listened to only half of the words. 2nd item's mean was found to be only 1.86. Table 4.5 presents the detailed information about the 2nd question.

In the 3rd question it was investigated that when students repeating the pronunciation of the words whether they tried to say the pronunciation of the word exactly what they heard. It can be seen from Table 4.5 that most of the students, 77.3%, stated that they didn't make an effort to say the words exact with the characters' voice. Moreover, 13.6% of the students tried some of the words. Only 4.5% of the students tried all of the pronunciation of the words. The mean score for the 3rd item was found to be just 1.33.

Table 4.5 – Students' perception about the dictionary page usage summary

		None % (N)	Some % (N)	Half % (N)	Most % (N)	All % (N)	Mean	St.Dev
Q.1	I heard the pronunciation of the words in the dictionary page.	22.7 (5)	4.5 (1)	13.6 (3)	18.2 (4)	40.9 (9)	3.50	1.63
Q.2	I tried to repeat the pronunciation of the words in the dictionary page.	54.5 (12)	27.3 (6)	4.5 (1)	4.5 (2)	9.1 (2)	1.86	1.28
Q.3	When I was repeating the pronunciation of the words, I tried my voice to look like the voice that I heard.	77.3 (17)	13.6 (3)	— (0)	— (0)	4.5 (1)	1.33	0.91

As it can be seen from Table 4.5 nearly half of the students listened to the pronunciation of the words, however almost all of them show no effort for repeating the pronunciation of the words.

By the 4th question students were asked that whether hearing the pronunciation of the words helped them in terms of hearsay. 63.6% of the students thought that dictionary page useful in terms of acquiring hearsay. 27.2% of the students thought that dictionary page had no effect on acquiring hearsay and 9.1% of the students were undecided. The overall mean for this item was found to be 3.45. It was seen from the results that most of the students who listened the most of the words, thought that they acquired hearsay through the dictionary page. From Table 4.6 the detailed information about the students' perceptions about the dictionary page in terms of hearsay can be seen.

Table 4.6 – Students' perceptions about the dictionary page in terms hearsay

		SD % (N)	D % (N)	N % (N)	A % (N)	SA % (N)	Mean	St.Dev
Q.4	Being able to hear the pronunciation of the words in the dictionary page, I have acquired hearsay.	13.6 (3)	13.6 (3)	9.1 (2)	40.9 (9)	22.7 (5)	3.45	1.37

As stated previously, students who spent more time in the dictionary page thought that dictionary page helped them in vocabulary learning. There is also a relation that the students who spent more time in dictionary page thought that they have acquired hearsay through the dictionary page. After some time spent in dictionary page students' perceptions scores became stable. Figure 4.2 shows the detailed information about time spent in dictionary page and students' perceptions about hearsay.

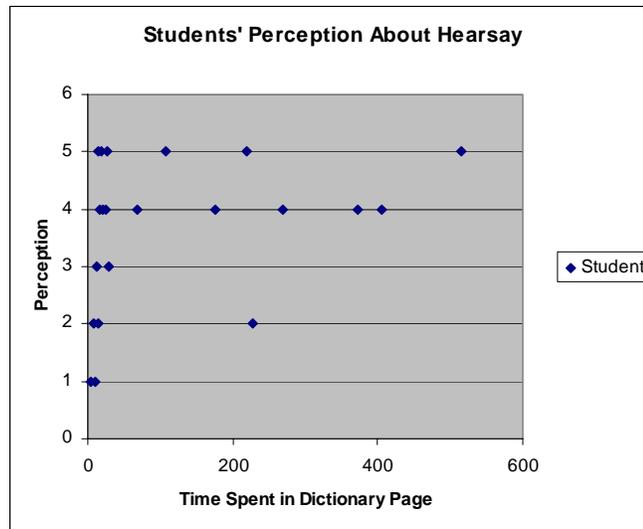


Figure 4.2 – Students’ perceptions about hearsay versus time spent in dictionary page

The 6th dictionary page question was asked to students for comparing their pronunciation experiences with this tool and their previous experiences. It was aimed to find out that students feel any difference between their pronunciation for the web-based learning tool words and for their previously learnt words. Less than half of the students stated that they did much better with the web-based learning tool. On the other hand, half of the students stated that they didn’t pronounced better with the web-based learning tool. The mean was 2.73 for the 6th item. If the students were disagree the 2nd and 3rd questions, they were also disagree in the 6th question. In Table 4.7 the details can be seen.

Table 4.7 – Students experiences in terms of pronouncing.

		SD % (N)	D % (N)	N % (N)	A % (N)	SA % (N)	Mean	St.Dev
Q.6	I pronounced the dictionary page words much better than the words I had learnt before.	22.7 (5)	27.3 (6)	13.6 (3)	27.3 (6)	9.1 (2)	2.73	1.35

4.3.2.2 Students' Perceptions about the Chat Page in Terms of Hearsay

In question 3rd, students were asked that the effect of hearing helped them to acquire hearsay or not. 45% of the students expressed that chat page helped them to acquire hearsay. However, 13.6% of the students didn't think that chat page was useful in terms of acquiring hearsay. With an interesting percentage of 31.8, students were unclear about chat page's usefulness in terms of hearsay. The mean of the item was found to be 3.52. The detailed information about students' perceptions about chat page in terms of hearsay showed in Table 4.8.

Table 4.8 – Students' perceptions about the chat page in terms hearsay

		SD % (N)	D % (N)	N % (N)	A % (N)	SA % (N)	Mean	St.Dev
Q.3	Being able to hear the writings in the chat page, I have acquired hearsay.	9.1 (2)	4.5 (1)	31.8 (7)	27.3 (6)	22.7 (5)	3.52	1.21

The researcher observed that there was a communication problem in chat environment. The reason for that, there were many students trying to write at the same time. However, the character only reads the last message posted to the chat. When the character was reading a sentence if another sentence was posted, the character stopped reading the previous one and continued reading the last posted message. Therefore, sometimes it was really difficult to listen to the messages clearly.

Although there were a positive relation between time spent in dictionary page and the students' perceptions about hearsay, in chat page after a time the students' perception

scores decreases. It can be seen from Figure 4.3 that there is also a critical time point that the students' perceptions scores changes and became stable.

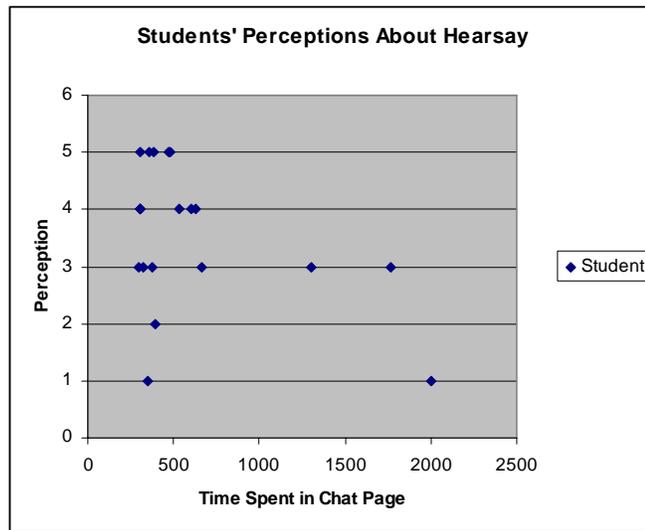


Figure 4.3 – Students’ perceptions about hearsay versus time spent in chat page

4.3.3 Students’ Perceptions about the Web-based Learning Tool in Terms of Communication

In the chat page the students communicated with each other in a written form, and the students were asked to compare their chat communication with classroom communication. First of all, they were asked how many times they have been in a chat environment. 50% of the students indicated that they had been in a chat environment more than 4 times. 9.1% of the students used chat environment 3 times, 13.6% of the students 2 times. The percentage of the students that they were been in a chat environment for only one time was 18.2. There were no students that didn’t participate in a chat session. The percentages of the students previous chat use is shown in Table 4.9. The mean score of previous chat use is 3.80.

Table 4.9 – Students previous chat use.

		0 % (N)	1 % (N)	2 % (N)	3 % (N)	4 or > % (N)	Mean	St.Dev
Q.0	If you have used a chat environment like the one you just used, please choose how many times you were been in a chat environment.	— (0)	18.2 (4)	13.6 (3)	9.1 (2)	50.0 (11)	3.80	1.61

It was observed that most of the students had no difficulty in using chat. Although some of the students were fast and some of the others were slow, the chat environment was not a disturbing environment for the students. It was seen that the students were familiar using chat, that most of the students used emotional symbols like ☺, ☹, :p and etc.

Students were asked to compare the chat environment with the classroom environment, whether they express themselves more easily in the chat environment or in the classroom environment. Nearly half of the students thought that they can express their ideas more easily in the chat environment. 27.3% of the students disagree with that idea. 22.7% of the students had no idea when they asked to compare the chat environment with the classroom environment. The mean for this item was 3.33 and Table 4.10 shows the detailed information.

Table 4.10 – Students’ perceptions on the comparison of the chat environment with the classroom environment in terms of expressing their ideas.

		SD % (N)	D % (N)	N % (N)	A % (N)	SA % (N)	Mean	St.Dev
Q.1	I express myself more easily in chat environment than classroom environment.	9.1 (2)	18.2 (4)	22.7 (5)	22.7 (5)	22.7 (5)	3.80	1.61

The researcher observed that the students discussed as the teacher was not in the chat environment although she was in. While some students were sharing their ideas, some other students wrote their ideas about the subject, too. But no response returned by the students to the new participant. This time new participant stopped posting his or her ideas.

Another question was about in which environment students were more comfortable in terms of making mistake. 54.5% of the students feel that they were more comfortable in chat environment than the classroom environment. However, 36.4% of the students were afraid of making mistakes in both environments. Only 9.1% of the students were unclear, and the mean score was 3.14. Table 4.11 shows the details.

Students also evaluated their teacher, in which environment their teacher corrected their mistakes faster. Only 27.3% of the students thought that the teacher corrected their mistakes faster in the chat environment than the classroom environment. On the other hand, half of the students expressed that the teacher corrected their mistakes faster in the classroom environment. There were also unclear students with 22.7%. The mean for this item was 2.68. The detailed information about students' comparison of the chat environment with classroom environment is show in Table 4.11.

Table 4.11 – Students’ perceptions on the comparison of the chat environment with the classroom environment.

		SD % (N)	D % (N)	N % (N)	A % (N)	SA % (N)	Mean	St.Dev
Q.2	I don't afraid of making mistakes in chat environment as in classroom environment.	18.2 (4)	18.2 (4)	9.1 (2)	40.9 (9)	13.6 (3)	3.14	1.39
Q.6	The teacher corrected my mistakes faster in chat environment than classroom environment.	27.3 (6)	22.7 (5)	22.7 (5)	9.1 (2)	18.2 (4)	2.68	1.46

During the chat session, the researcher observed that the teacher only asked some questions about the subject. By doing this, teacher directed the students into deeper understanding of. However, she didn't make any corrections in the syntax.

The students expressed their experiences about the chat environment by the 4th question. As it is shown in Table 4.12, 36.4% of the students stated that they followed writings in the chat easily. However, 50% of the students stated that they had difficulties in following the writings in the chat environment. 13.6% of the students were unclear about this item. The mean for this item was 2.86.

It was observed that it was difficult to follow the chat history clearly. There were many people communicating at the same time, this means nearly 5 and 6 students posting a message at the same time. This resulted in difficulties in following the chat history.

The students were asked to express their perceptions about the use of chat. It can be seen from Table 4.12 that 50% of the students stated that they had no problems in expressing their ideas in the chat environment. 22.7% of the students stated that

although they had ideas about the discussion they had problems in participating the chat session. Moreover, 27.3% of the students were undecided.

Table 4.12 – Students’ perceptions about the use of the chat environment.

		SD % (N)	D % (N)	N % (N)	A % (N)	SA % (N)	Mean	St.Dev
Q.4	I easily followed the writings in the chat environment.	18.2 (4)	31.8 (7)	13.6 (3)	18.2 (4)	18.2 (4)	2.77	1.38
Q.5	Although I had ideas about the discussion topic, I had troubles in participating chat session.	4.5 (1)	18.2 (4)	27.3 (6)	18.2 (4)	31.8 (7)	3.55	1.26

Note: 5th item was coded reversely and the un-reversed mean score was 2.45.

4.3.4 Problems That Students Faced While Using the Web-based Learning Tool

In the questionnaire there were two open-ended questions for each category. These questions were used to obtain students’ opinions and comments. The first open ended question was intended to find out the problems that the students were faced while using the web-based learning tool.

For the dictionary page, 20 students stated that they did not face any problems while using this page. Only one student wrote that he found the dictionary page insufficient. There was one student who wrote “I don’t know”. Detailed information is given in Table 4.13.

Table 4.13 – Students’ perceptions about the dictionary page in terms of problems

		N	%
Q.8	Can you explain, if you faced problems while using the dictionary page?		
	None	20	91.0
	Don’t know	1	4.5
	Insufficient	1	4.5

It was observed that the students only listened to the pronunciation of the words and just skimmed the meanings of the words. They didn’t spend much time in dictionary page.

The questions 8 was asked to investigate students’ perceptions about the chat page in terms of problems and results are given in the Table 4.14. For the chat page, 16 students stated that they didn’t face with any problems. On the other hand, six students expressed that the writings in the history of the chat object goes fast that they didn’t follow the writings. Three of those students were not been in a chat environment more than 3 times.

Table 4.14 – Students’ perceptions about the chat page in terms of problems

		N	%
Q.8	Can you explain if you faced problems while using the chat page?		
	None	16	72.7
	Can’t follow the history.	6	27.3

Although most of the students stated that they had no problems in chat page, it was clear that following the chat history was difficult. Moreover, if multiple messages posted successively it was difficult to listen.

The questions 6 was asked to investigate students' perceptions about the activities page in terms of problems and the results are given in Table 4.15. For the activities page all of the students expressed that they didn't face with any problems.

Table 4.15 – Students' perceptions about the activities page in terms of problems

		N	%
Q.6	Can you explain if you faced with problems while using the activities page?		
	None	22	100

Most of the students spent more time in activities page. Few students gave up the activities page after the second crossword puzzle. The students were requested to raise their hands when they finished all the crossword puzzles. It was observed that most of the students finished all three crossword puzzles.

4.3.5 How Should the Web-based Learning Tool Improved to be more Effective

In the questionnaire, the second open-ended questions for each category were intended to get students' opinions and expectations what other things they want to see in the corresponding page.

For dictionary page, there were different answers for the 9th question, i.e., “what other things you want to see in the dictionary page”. As presented in Table 4.16, 13 of the students found dictionary page as enough, and two students had no idea. Seven students wanted more words to be in the dictionary page. Four students stated that “there should be pictures of the words” and one student said that there should be animations for the

words. One student wanted to see the Turkish meanings of the words and one student desired a sample sentence that a word used in.

Table 4.16 – Students’ perceptions about the dictionary page in terms of expectations

Q.9	What other things you want to see in the dictionary page?	N	%
	None	13	44.8
	Don’t know	2	6.9
	More vocabulary	7	24.1
	Pictures for the words	4	13.8
	Animations for the words	1	3.4
	Turkish meanings of the words	1	3.4
	Sample sentences for the words	1	3.4

When students were asked to express their expectations about the chat page, 13 of the students expressed that chat page is sufficient. According to nine students there should be special chat rooms for specific subjects or groups. The detailed information is presented in Table 4.17 below.

Table 4.17 – Students’ perceptions about the activities page in terms of expectations

Q.9	What other things you want to see in the chat page?	N	%
	None	13	59.1
	Special chat room	9	40.9

Moreover, most of the students stated that they don’t need any other thing in the activities page as it can be seen from Table 4.18. Six students desired other game activities in the activities page. For the activities page, it can be said that it was the most positively perceived page in the web-based learning tool.

Table 4.18 – Students’ perceptions about the activities page in terms of expectations

Q.7	What other things you want to see in the activities page?	N	%
	None	16	72.7
	Other game activities	6	27.3

4.3.6 Students’ Perceptions about the MS-Agent Character

Students’ perceptions about the Merlin character investigated in three aspects, the first one was whether the students liked the Merlin character or not, and the second one was about the speech of the character and the third one was about the function of the character in the web-based learning tool. There were 6 questions about the Merlin character.

The first question was about whether the students liked the Merlin character or not. 63.6% of the students found the Merlin character as pretty. 22.7% of the students were unclear about the question, and 4.5% of the students didn’t like the Merlin character. The mean score was 4.25 for the first question and the detailed information is shown in the Table 4.19.

Table 4.19 – Students’ perceptions about the Merlin character in terms its prettiness.

		SD % (N)	D % (N)	N % (N)	A % (N)	SA % (N)	Mean	St.Dev
Q.1	The Merlin character was pretty.	— (0)	4.5 (1)	22.7 (5)	9.1 (2)	54.5 (12)	4.25	1.02

The 2nd and 3rd questions were asked to find out the appropriateness of the speech characteristics of the Merlin character. The 3rd question was asked to get whether the pace of speech of the Merlin character is appropriate to understand for the students.

68.2% of the students expressed that the pace of speech of the character was appropriate, where 13.6% of the students didn't find the pace of speech as appropriate. 9.1% of the students were undecided. The mean score was 4.10. The details are presented in Table 4.20.

Table 4.20 – Students perceptions about the Merlin character's pace of speech.

		SD % (N)	D % (N)	N % (N)	A % (N)	SA % (N)	Mean	St.Dev
Q.2	The pace of speech of the Merlin character was appropriate.	4.5 (1)	9.1 (2)	9.1 (2)	18.2 (4)	50.0 (11)	4.10	1.25

In the 3rd question it was asked whether the speech of the character was understandable or not. 59.1% of the students defined the speech of the character as understandable; on the other hand, 13.6% of the students did not. 13.6% of the students were unclear about the item. The mean score was found to be 4.00, and the detailed information is shown in Table 4.21.

Table 4.21 – Students perceptions about the speech of Merlin character in terms of understandability.

		SD % (N)	D % (N)	N % (N)	A % (N)	SA % (N)	Mean	St.Dev
Q.3	The speech of the Merlin character was understandable.	4.5 (1)	9.1 (2)	13.6 (3)	13.6 (3)	45.5 (10)	4.00	1.29

The last three questions (4, 5, and 6) were intended to get students' perception about the Merlin character in terms of functionality. Whether the explanations of the character were enough and the directions of the character helped the students in terms of site usage. It can be said that the students found the explanations for the each page enough

with a mean of 4.40. It can be seen from Table 4.22 that 77.2% of the students found the explanations enough, and only 4.5% of the students didn't think that it was enough. Still 9.1% of the students were unclear.

In order to understand the Merlin character guided the students in the site, the 5th question was asked. The mean score was found to be 3.75 and 59.1% of the students perceived that the character directed them within the site. 18.1% didn't think that the character directed them within the site. 13.6% of the students were unclear. On the other hand, 45.4% of the students thought that the directions of the character helped them to surf more easily within the site. 22.7% of the students didn't think that the directions of the character helped them in terms of surfing, and the same percent of the students were unclear. The mean was 3.50. Information about students' perceptions about the Merlin character in terms of functionality are presented in Table 4.22.

Table 4.22 – Students' perceptions about the Merlin character in terms of functionality.

		SD % (N)	D % (N)	N % (N)	A % (N)	SA % (N)	Mean	St.Dev
Q.4	The explanations of the Merlin character for each page were enough.	— (0)	4.5 (1)	9.1 (2)	22.7 (5)	54.5 (12)	4.40	0.88
Q.5	Merlin character directed me within the site.	13.6 (3)	4.5 (1)	13.6 (3)	18.2 (4)	40.9 (9)	3.75	1.48
Q.6	The directions of the Merlin character helped me to surf more easily within the site.	9.1 (2)	13.6 (3)	22.7 (5)	13.6 (3)	31.8 (7)	3.50	1.40

4.4 Teacher's Perception about the Web-based Learning Tool

The teacher's perception about the web-based learning tool investigated in four main categories which are vocabulary learning, hearsay, communication and the Merlin

character. An interview conducted with the teacher in order to get the teachers opinions about the categories listed above.

4.4.1 Teacher's Perception about the Vocabulary Learning

What the teacher thought about dictionary page and activities page in terms of vocabulary learning was investigated. The teacher was asked that "For which aim you used the dictionary page?". The teacher stated that the dictionary page was used mainly for remembering and repeating purposes.

The teacher was asked that "For which purpose you used the activities page?". The teacher expressed that the practicing is the most important part of language learning. Therefore, activities page was used for practicing. Vocabulary learning needs continuous use of the words, so the students will acquire the meaning of the words. The teacher especially stated that

"The students don't know how to study vocabulary. They usually write the Turkish meaning of the words and memorize them. But this is not the case when they get the quizzes and the exams. In the exam, we ask fill in the blanks and matching questions."

The teacher also concluded that it is important to give various materials to the students for practicing the vocabulary. There should be activities like puzzles, fill in the blanks, and etc. for giving study opportunities to the students. It is the first phase to know the meaning of the words and then it is important to use it in a sentence. Therefore, activities page was useful in terms of vocabulary learning and there may be other activities in the future.

4.4.2 Teacher's Perception about the Hearsay

The teacher stated that hearing the pronunciation of the words in the dictionary page and chat page can help the students to acquire hearsay. Therefore, giving such an opportunity will be useful. The teacher indicated that in the dictionary page students can practice the pronunciation of the words, so when they trouble in pronunciation of a word they have opportunity of hearing the pronunciation of the word.

The teacher expressed her ideas about the chat page that sometimes it was difficult to follow online communication (writing and listening). When many students wrote at the same time, the speaking of the character was interrupted and only the last sentence was read by the character. It was the only problem for this page. On the other hand, hearing the sentence that the student wrote, is a good opportunity for the students to acquire hearsay from the chat page.

4.4.3 Teacher's Perception about the Communication

The teacher clearly expressed her ideas about the chat page in terms of communication. The teacher stressed that the students love computers and the Internet. The teacher stated that “in the Internet environment some barriers for communication such as timidity, shyness and fear of making mistakes disappear”. The teacher stated that there was more participation in the chat discussion than the classroom discussion. Moreover, the teacher indicated that chat enabled her to see the students' instant writings. Although sometimes it was fast, it was usable for both students and the teacher to see their instant sentences and mistakes if any. The teacher stated that in the student sentences, she looked especially for whether the students wrote grammatically correct sentences or not, and whether the students used the words of the unit in their sentences.

4.4.4 Teacher's Perception about the MS-Agent Character

The teacher was also asked to express her opinions about the Merlin character used in the web-based learning tool. The teacher expressed that using such a tool can help to improve students in acquiring hearsay, and she thought that the Merlin character was pretty therefore, the students' attitudes towards the Merlin were positive. When the students like something, then they do the activities and tasks voluntarily. The teacher expressed that the speech of the character was at a normal pace and understandable. She indicated that the Merlin character can be used in language learning effectively.

CHAPTER 5

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

In this chapter, according to the results presented in the previous chapter, discussion and interpretation of the results are presented. Suggestions for practice, recommendations for researchers and recommendations for further research are also presented.

5.1 Discussion

The main purpose of this study was to investigate the web-based learning tool in terms of students' perceptions and the teacher's perception in the context of elementary level ESL instruction. Web-based learning tool will be investigated in vocabulary learning, hearsay, communication, problems of the pages and expectations and the Merlin character.

The data were collected through questionnaires and an interview. The participants of this study were 22 elementary 8th grade students at METU College. There were 12 female and 10 male students.

5.1.1 Vocabulary Learning

More than half of the students found the dictionary page helpful in their vocabulary learning with a mean of 3.23. It was observed from the logs that the students who spent more time in dictionary page thought that dictionary page helped them in their vocabulary learning. The study of McCreesh (1989) aiming to teach phrasal verbs and vocabulary, showed that when students spent more time with computers they thought that computers can replace a teacher. When students understand the aim of the software they became aware of the benefits of the software. Therefore, students' responses became positive when they spent more time with the software. Researcher observation points that some students deeply focused on the page, they tried to understand the purpose of the dictionary page, they investigated and they fully used the dictionary page. Active dictionary page users benefited from the dictionary page in terms of vocabulary learning.

More than half of the students thought that dictionary page is useful and the mean score for this item is 3.38. It was understood that the students who spent more time in dictionary page, who thought that dictionary page helped them in their vocabulary learning also thought that dictionary page is useful. Another reason might be that most of the students stated that they didn't face any problems while using the dictionary page.

The students who found practicing by playing game funny also thought that making practice by playing game helped them in their vocabulary learning. In his study McCreesh (1989) found that most the students participated in his study found working with computers funny. Moreover, Jones and Fortescue (1991) clearly states that computers offer a different environment for the students, that is computerized activities

motivates the students. It was observed and seen from the site logs that students who spent more time in the first crossword puzzle finished all of the crossword puzzles. This supports the study of Jones and Fortescue that students who found the activities attractive were motivated to continue to finish all of them.

Most of the students stated that the crossword puzzle helped them in learning the meanings of the words and the mean score is 4.00. Today's children are familiar with computers and internet; they spend most of their time in front of computers. They like playing with computers especially internet (Liu et al., 2003). From the results it can be seen that most of the students found the crossword puzzle to be funny. They may not riddle newspaper crossword puzzles, and they may not find them to be funny. However, when the students are in front of computers, such activities become funny. Marshall (1987) and Gilby (1989) indicated that doing interactive computer exercises is more exciting than pencil and paper exercises. On the other hand, there should be different activities for the students to give various kinds of exercises.

The mean score for the 5th activities page item is 3.45, that is, more than half of the students indicated that crossword puzzle helped them in practicing the spelling of the words. In his research Church (1986) found that although most the students didn't find exercises very helpful for vocabulary learning, 79.5% of the students participated in the study thought that spelling exercises were very helpful in the computer environment.

The teacher also perceived the activities page as effective in terms of vocabulary learning. The teacher thought that the activities page is a good environment for

practicing vocabulary in an attractive way, and can help students to acquire both meanings of the words and spelling of vocabulary.

Nearly half of the students used the activities page together with the dictionary page with a mean score of 3.10. Actually most of the students who thought that dictionary page helped them in learning vocabulary didn't refer to the dictionary page while they were in activities page. However, the students who spent less time in dictionary page were those who just skimmed the words used in the dictionary page while riddling the crossword puzzle. This means that good dictionary page users clearly remembered the unit words. The study of Nagata (1998) also found that most of the students referred to the vocabulary hints and grammar notes while doing the CALI (Computer-Assisted Language Instruction) exercises.

5.1.2 Hearsay

From the results, it is seen that most of the students listened to the pronunciation of most of the words (mean score is 3.50), however, it is observed and seen from the results that nearly none of the students tried to repeat the pronunciation of the words (mean score is 1.86). This result was discussed with the teacher. After the discussion, it became clear that the students didn't have the habit of listening and repeating. The teacher explained that in their class they didn't make classical "listen and repeat after me" practices. When a student makes a pronunciation mistake the teacher individually corrects it. Therefore, the students listened to the pronunciation of most of the words, but they didn't show any effort to repeat the pronunciation of the words. With a mean score of 3.45, nearly most of the students thought that they acquired hearsay via hearing the pronunciation of the words from the dictionary page. However, nearly all of the

students didn't show any effort to practice the pronunciation of the words by speaking. Therefore, it is not significant to say that students improved their speaking skill by hearing the pronunciation of the words.

Besides, half of the students stated that they acquired hearsay through the chat page, the mean score for this item is 3.52. Actually, the students who feel comfortable in chat environment also thought that they acquired hearsay through the chat page. Although chat page is not as effective as the dictionary page in terms of helping students to acquire hearsay, students thought that they acquired hearsay through the chat page.

The teacher found the speech technology to be effective in terms of helping students to acquire hearsay. She specifically explained that such a technology can be used in language learning for several purposes but especially for listening. She indicated that chat page must be redesigned in order to be more effective in helping students to acquire hearsay.

5.1.3 Communication

Most of the students indicated that they expressed themselves more easily in chat environment than in classroom environment, the mean score is 3.80. Moreover, more than half of the students expressed that they were not afraid of making mistakes in the chat environment compared to the classroom environment (mean score is 3.14). Huebener (1960) stated that when students work within an individualized environment, whenever the student makes an error he or she is not embarrassed compared to classroom environment. The teacher in parallel indicated that the students are freer and

participate more in chat environment than classroom environment. This may be because of the neutrality of the chat environment.

Although Sotillo (2000) reported that when students found errors in their peer's writings they corrected each other. However, in the chat environment neither students nor the teacher show an effort to correct student errors. Sotillo stated that in synchronous communication there is mostly informal speech which is actually representing our life conversations. Wilkins (1974) stated that in our daily conversations we often speak informal and mostly omit the grammatical rules of the language.

The nature of the chat environment let most of the students express their ideas freely. Although, most of the students set up grammatically correct sentences, there were some mistakes coming from the nature of chat environment, for example, writing "ithink" or "I thing" instead of "I think". Some students made some grammatical mistakes, however, neither themselves nor their friends tried to correct the mistake. Therefore, the students didn't show any effort to correct peers errors in their writings.

In the chat environment nearly all of the students had the same possibility of expressing his or her ideas (Liu et al.). However, in classroom environment they have to get permission from the teacher to speak, and the teacher may or may not give an opportunity to him or her to speak. Therefore, some students may think that they didn't express themselves easily in chat environment. Especially students, who didn't get any answers to their questions, slowed down to posting messages.

5.1.4 Problems of the Pages and Expectations

Nearly all of the students stated that they didn't face any problems while using the dictionary page. On the other hand, when the students were asked what other things there should be in the dictionary page, there were different answers. Some students desired more vocabulary items, and some desired pictures for the words. The teacher especially didn't want any visual clues for the vocabulary items. The teacher stated that there should only be the meaning of the words in English. The vocabulary of the dictionary page was limited by the vocabulary of the "All Stars" unit. Therefore, the students' desire for more vocabulary should be solved in other ways. There may be "Vocabulary of the Unit" page that presents the vocabulary of the current unit and a "Dictionary" page that serves as an actual dictionary. Moreover, the visual clues may be presented within the "Dictionary" page.

Most of the students stated that they didn't face any problems while using the pages. However, some students indicated that they had difficulty in following the writings in the chat. The study of Sotillo on online communication resulted that rapid message posting resulting in loss of chronological information which makes it difficult for the students to concentrate on the subject being discussed. However, it is interesting that 3 of the students, who stated that they had difficulty in following the chat history, have not been in a chat environment more than 3 times. The teacher also stressed that it sometimes became difficult to read the chat history. This was discussed with the teacher and it was concluded that there must be special chat rooms that the students can participate. These special chat rooms can be formed according to groups or topics. The unit topic may be divided into main topics then special chat rooms can be formed, and there shouldn't be more than 6 students in a specific chat room.

5.1.5 The MS-Agent Character

Most of the students found the Merlin character pretty. Few students were unclear about that. There are so many characters like Merlin. The students can be given the opportunity of choosing their own character.

The pace of speech of the Merlin was adjusted one week before the treatment with the teacher. It may be because of this reason that the students found the pace of speech of the Merlin character normal. Moreover, most of the students stated that they understand the speech of the Merlin character. More than half of the students found the Merlin character functional in terms of explanations and directions.

The teacher found the Merlin character usable especially in foreign language learning. She indicated that to improve students' listening, and speaking skills Merlin character can be used in different applications.

5.2 Conclusions

For vocabulary teaching it is more important to give students the opportunity of practicing. In this study, activities page was perceived more positively. The reason is that, the activities page gave students the opportunity of working in an attractive way. When students like the activity they are working on, the learning process becomes more effective. It is important to give different kinds of activities which attract and reach not only a portion of students but most of them.

Although this study was conducted for a short period of time, students perceived the technology they used as effective in acquiring hearsay. Especially dictionary page is

perceived positively in terms of improving hearsay. In this study the chat environment was perceived as having some problems, however, a well designed chat page can also help students to acquire hearsay.

Online communication offers a different environment for the students. Today's children like internet activities and they are familiar with online messaging systems such as SMS, ICQ, chat, etc. The chat environment in this study was perceived positively in terms of communication. Students participated often, they were less afraid of making mistakes and they expressed themselves more easily. Therefore, such an environment can improve both students' writing skill and instant thinking ability.

Students liked the internet character used in this study. The pace and understandability of its speech were positively perceived by the students. Such a technology can be used especially for listening. Moreover, it can be used as an online assistant as students perceived the internet character as functional in guiding them. Therefore, such a technology can be used for several purposes in foreign language teaching and learning.

5.3 Recommendations for Practice

From the development phase and results of this study the following suggestions may help instructors, and instructional designers in designing and delivering computer assisted instruction for foreign language.

- If speech technology is going to be used for listening, adjust the pace of speech with the classroom teacher before the application.

- Give the students the opportunity of practicing in attractive ways. If possible support different kinds of activities for the same unit.
- Let the students to choose their virtual assistants from a wide range of characters.
- In chat environment provide special chat rooms that can be managed by the teacher. For an ideal communication there shouldn't be more than 6 persons at a specific chat room.
- In chat environment give the teacher the opportunity of stopping a chat session and then restarting it.

5.4 Recommendations for Researchers

In order to deeply understand the results of the quantitative data, conduct focus group interviews. In this study there were nearly 25% of the participants who were unclear about the questions asked. This is actually a great percentage, therefore, in order to understand why these students were undecided, prepare interview questions. Moreover, focus groups can help to understand both the reasons of positive and negative perceptions of the participants.

Participant perceptions are important in qualifying the quality of the educational tool. However, sometimes the participants perceive a tool used in a study as ineffective in terms of improving their learning. However, with a long term investigation considering student achievement, significant improvement in the students' learning may be observed.

5.5 Recommendations for Future Research

Based on the results of this research, there are different areas that need to be investigated.

This study was conducted with elementary level students. The effectiveness of text-to-speech technologies can be investigated especially with lower grades for not only practice but also teaching purposes. Moreover, with higher grades levels, mainly focusing on the listening ability and the students' achievement can be an interesting subject to investigate.

One part of this study investigated the students' perception of web-based learning tool in terms of hearsay in a short period of time. Another research may focus on the students' achievement in speaking in longer period of time, especially, for the young students at elementary level.

Language learning, especially foreign language learning mainly focuses on listening and speaking. In this study listening ability was taken over the speaking ability. However, speech recognition is also an interesting subject to focus on. Speech recognition technologies are developing and improving in quality. Ms-Agent technology also supports speech recognition technologies. Speech recognition is an interesting area to be investigated in terms of foreign language learning. Speech technology can enable immediate feedback to the participants which has positive outcomes in the learning process.

In this study chat environment was used in peers, and only the students' perceptions were taken into consideration. In foreign language learning, communication in target language in the context of target culture is important. Therefore, providing longer period of chat sessions within the target language context and with native speakers can be investigated in terms of students' perception and achievement in writing.

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APPENDIX A

BİLGİSAYARA YÖNELİK TUTUM ÖLÇEĞİ

Bu çalışmanın amacı sizlerin bilgisayar konusundaki düşüncelerinizi öğrenmektir. Cevaplar kesinlikle gizli tutulacaktır.

LÜTFEN CEVAPSIZ SORU BIRAKMAYINIZ.

Yardımlarınız için teşekkür ederiz.

Okulunuz : Cinsiyetiniz :.....
Sınıfınız :

Bilgisayar konusunda daha önce bir eğitim aldınız mı? Evet Hayır

Cevabınız **EVET** ise lütfen aşağıdaki soruları cevaplayınız.

Eğitim aldığınız yer :

Eğitim sonucunda bir belge aldıysanız, adı :

Bilgisayar ile çalışma süreniz:

Hiç çalışmadım	()	1 Haftadan Kısa	()
1 hafta – 3 hafta arası	()	1 ay – 2 ay arası	()
2 ay – 6 ay arası	()	6 ay – 1 yıl arası	()
1 yıldan fazla	()		

LÜTFEN AŞAĞIDAKİ SORULARI DİKKATLİCE OKUYUNUZ VE GÖRÜŞÜNÜZ DOĞRULTUSUNDAKİ SEÇENEĞİN HİZASINDAKİ SÜTUNU İŞARETLEYİNİZ. SEÇENEKLERDEN YALNIZCA BİRİNİ İŞARETLEYİNİZ.

	Kesinlikle Katılıyorum	Katılıyorum	Katılmıyorum	Kesinlikle Katılmıyorum
1. Bilgisayarlar beni korkutmuyor.				
2. Bilgisayar kullanma konusunda hiç iyi değilim.				
3. Bilgisayarlarla çalışmayı isterim.				
4. Bilgisayarı yaşamımda birçok biçimde kullanacağım.				
5. Bilgisayarlarla çalışmak sınırlarımı bozabilir.				
6. Yeni bir problemi bilgisayar kullanarak çözmeye çalışmam gerekse genel olarak bu konuda kendimi iyi hissederim.				
7. Bilgisayarlarla problemleri çözmek bana çekici gelmiyor.				
8. Bilgisayarlar hakkında bir şeyler öğrenmek zaman kaybıdır.				
9. Başkaları bilgisayarlardan söz ettiğinde rahatsızlık duymuyorum.				
10. İleri düzeyde bir bilgisayar çalışması yapacağımı sanmıyorum.				
11. Bilgisayarlarla çalışmanın zevkli ve teşvik edici olduğunu düşünüyorum.				
12. Bilgisayarlar hakkında bilgi edinmeye değer.				
13. Bilgisayarlara karşı saldırgan ve düşmanca duygular besliyorum.				
14. Bilgisayarlarla çalışabileceğime eminim.				
15. Bilgisayar problemlerini çözmek beni cezbetmiyor.				
16. Gelecekteki çalışmalarım için bilgisayarda iyice ustalaşmam gerekecek.				

	Kesinlikle Katlıyorum	Katlıyorum	Katılmıyorum	Kesinlikle Katılmıyorum
17. Bilgisayar kursları almak için zahmete girmem.				
18. Bilgisayar kullanmada iyi olabilecek tipte biri değilim.				
19. Bir bilgisayar programında hemen çözemediğim bir sorun olduğunda cevabı bulana kadar vazgeçmem.				
20. Günlük hayatımda bilgisayarları çok az kullanacağımı tahmin ediyorum.				
21. Bilgisayarlar kendimi rahatsız hissetmeme neden oluyorlar.				
22. Bir bilgisayar dili öğrenebileceğime eminim.				
23. Bazı insanların nasıl olup da bilgisayarla bu kadar zaman geçirdiklerini ve bundan hoşlandıklarını anlamıyorum.				
24. Meslek hayatımda hiçbir zaman bilgisayar kullanacağımı zannetmiyorum.				
25. Bilgisayar dersinde huzurlu olurum.				
26. Bilgisayar kullanmak sanırım benim için çok zor olurdu.				
27. Bilgisayarlarla çalışmaya bir kez başlayınca bırakmak benim için çok zor olurdu.				
28. Bilgisayarlarla çalışmayı bilmek, iş bulma olasılıklarını arttıracak.				
29. Bilgisayar kullanmayı düşündüğümde başımdan aşağı kaynar sular boşaldığını hissediyorum.				
30. Bilgisayar derslerinde iyi notlar alabilirim.				
31. Bilgisayarlarla mümkün olduğunca az çalışma yapacağım.				
32. Bilgisayarla çözülebilecek her şeyi başka yollarla da çözebilirim.				
33. Bilgisayarlarla çalışırken kendimi rahat hissedirim.				

	Kesinlikle Katlıyorum	Katlıyorum	Katılmıyorum	Kesinlikle Katılmıyorum
34. Bir bilgisayar dersini becerebileceğimi sanmıyorum.				
35. Eğer bilgisayar dersinde bir problem çözülmeyen kalırsa üzerinde sonradan düşünmeye devam ederim.				
36. Bilgisayar derslerinde başarılı olmak benim için önemlidir.				
37. Bilgisayarlar beni huzursuz eder ve aklımı karıştırır.				
38. Bilgisayarlarla çalışmak gerektiğinde kendime yeterince güvenirim.				
39. Başkalarıyla bilgisayar hakkında konuşmaktan hoşlanmam.				
40. Çalışma hayatımda bilgisayarlarla çalışmanın benim için önemi yoktur.				

APPENDIX B

ÖĞRENCİLERİN WEB-TABANLI ÖĞRENME ARACINA KARŞI ALGILARI ANKETİ

Bu anketin amacı sizlerin kullandığınız site hakkındaki görüşlerinizi öğrenmektir. Cevaplar kesinlikle saklı tutulacaktır.

Lütfen aşağıdaki soruları dikkatlice okuyunuz ve size uygun olan seçeneğin hizasındaki sütunu işaretleyiniz.

LÜTFEN CEVAPSIZ SORU BIRAKMAYINIZ
Seçeneklerden yalnızca birini işaretleyiniz.

A. SÖZLÜK SAYFASI

	Hepsini	Çoğunluğunu	Yarısını	Birazını	Hiçbirini
1. Sözlük sayfasındaki kelimeleri dinledim.					
2. Sözlük sayfasındaki kelimeleri sesli olarak tekrar etmeye çalıştım.					
3. Sözlük sayfasındaki kelimeleri tekrar ederken sesimin duyduğum sese benzemesine çalıştım.					

	Kesinlikle Katlıyorum	Katlıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
4. Sözlük sayfasında kelimelerin okunuşlarını duyabilmem bende kulak dolgunluğu sağladı.					
5. Sözlük sayfası kelimeleri daha kolay öğrenmemi sağladı.					
6. Sözlük sayfasındaki kelimeleri daha önce program dışında öğrendiğim kelimelere göre daha iyi telaffuz ettim.					
7. Sözlük sayfası yeterince kullanışlıdır.					

8. Sözlük sayfasını kullanırken yaşadığınız sorunlar varsa açıklayınız?

9. Sözlük sayfasında başka nelerin olmasını isterdiniz?

B. SOHBET SAYFASI

Daha önce buna benzer başka bir sohbet ortamını kullandıysanız, kaç kere kullandığınızı seçiniz.

Hiç 1 kere 2 kere 3 kere 4 kere yada daha fazla

	Kesinlikle Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
1. Sohbet ortamında sınıf ortamına göre kendimi daha rahat ifade edebiliyorum.					
2. Sohbet ortamında yanlış yapmaktan sınıf ortamındaki kadar korkmuyorum.					
3. Sohbet ortamında yazılanları duyabilmem bende kulak dolgunluğu yarattı.					
4. Sohbet ortamında yazılanları kolayca takip edebildim.					
5. Konu ile ilgili fikirlerim olduğu halde sohbet ortamında konuya katılmakta sıkıntı çektim.					
6. Sohbet ortamında öğretmen yanlışlarımı sınıf ortamına göre daha çabuk düzeltti.					

7. Sohbet sayfasını kullanırken yaşadığınız sorunlar varsa açıklayınız?

8. Sohbet sayfasında başka nelerin olmasını isterdiniz?

C. ETKİNLİKLER SAYFASI

	Kesinlikle Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
1. Oyun oynayarak uygulama yapmak çok eğlenceliydi.					
2. Oyun oynayarak uygulama yapmak sözcükleri daha kolay öğrenmemi sağladı.					
3. Çapraz bulmacada sorulan sözcükleri sözlük bölümünden hatırladım.					
4. Çapraz bulmacada bir sözcüğü bulamadığım zaman sözlük bölümünden faydalandım.					
5. Çapraz bulmaca kelimelerin yazılışlarını tekrar etmemi sağladı.					

6. Çapraz bulmacayı kullanırken yaşadığınız sorunlar varsa açıklayınız?

7. Etkinlikler sayfasında başka nelerin olmasını isterdiniz?

D. MERLİN KARAKTERİ

	Kesinlikle Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
1. Merlin karakteri sevimliydi.					
2. Merlin karakterinin konuşma hızı uygundu.					
3. Merlin karakterinin konuşması anlaşılabilirdi.					
4. Merlin karakterinin her sayfa için açıklamaları yeterliydi.					
5. Merlin karakteri site içerisinde beni yönlendirdi.					
6. Merlin karakterinin yönlendirmeleri site içerisinde daha kolay gezinmemi sağladı.					



Yardımlarınız için teşekkür ederiz.

APPENDIX C

ÖĞRETMEN İLE GÖRÜŞME SORULARI

1. Sözlük sayfasını hangi amaçlar için kullandınız?
2. Aktiviteler sayfasını hangi amaçlar için kullandınız?
3. Öğrencilerin kelimelerin okunuşlarını duyabilmeleri hakkında ne düşünüyorsunuz?
4. Sohbet ortamı hakkındaki düşünceleriniz nelerdir? Sohbet ortamı tartışmasını sınıf içi tartışma ile karşılaştırır mısınız?
5. Merlin karakteri hakkındaki düşünceleriniz nelerdir?
6. Merlin karakterinin konuşma hızı ve anlaşılabilirliği hakkında ne düşünüyorsunuz?

APPENDIX D

SAMPLE PAGES OF THE WEB-BASED LEARNING TOOL

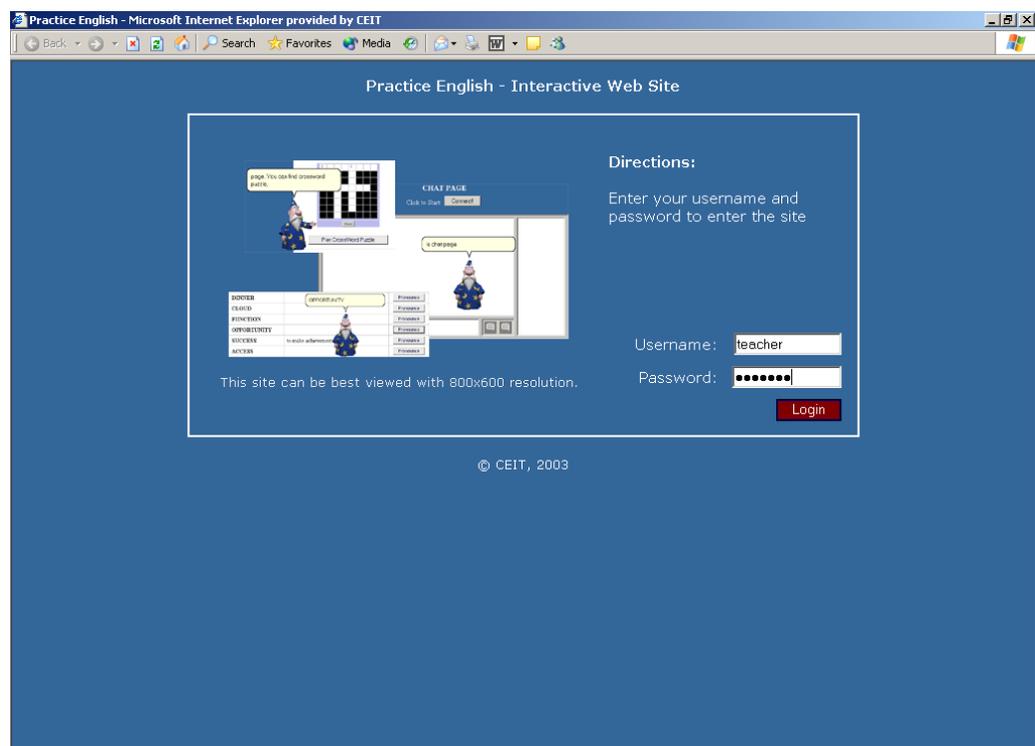


Figure 1 – Web-based Learning Tool Login Screen

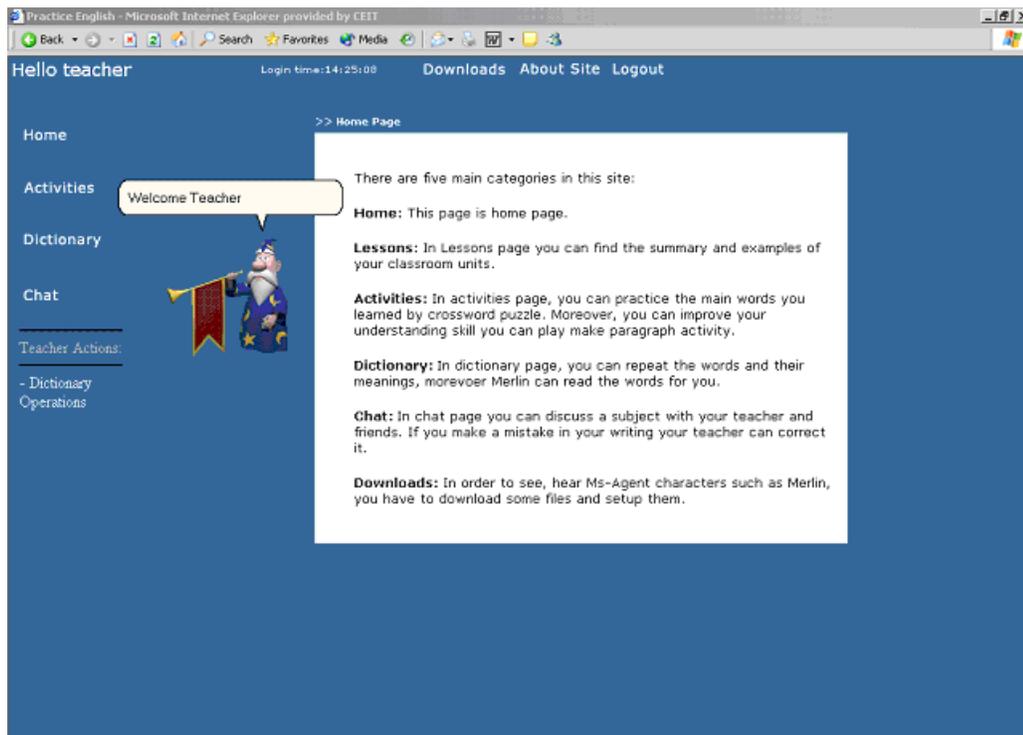


Figure 2 – Web-based Learning Tool Home Screen

Practice English - Microsoft Internet Explorer provided by CEET

Back Search Favorites Media

Hello teacher Login time:14:25:08 Downloads About Site Logout

>> Dictionary Page

Words	Explanation	Pronounce
ADMIT	to ad	Pronounce
BEAT	to d	Pronounce
EARN	to get money by working	Pronounce
EVIL	bad	Pronounce
FAN	the person who lo admires a particular thing or	Pronounce
GAIN	to get something or valuable	Pronounce
PICK	to choose	Pronounce
PITCH	football field	Pronounce
POPULAR	liked by a lot of people	Pronounce
PROFESSIONAL	opposite of amateur	Pronounce
PROMISING	to have a future in something	Pronounce
RECKON	to account	Pronounce
RESPONSIBILITY	be aware of your duties	Pronounce
TIMELIGHT	in public attention	Pronounce
TO GO CRAZY	to go mad	Pronounce
TO JOIN	to become a part of	Pronounce
TO VOTE	to choose someone /something a majority	Pronounce
WIN	to get the most point in a film	Pronounce

Click on the pronounce button to listen.

Home
Activities
Dictionary
Chat
Teacher Actions:
- Dictionary
Operations

Figure 3 – Web-based Learning Tool Dictionary Screen

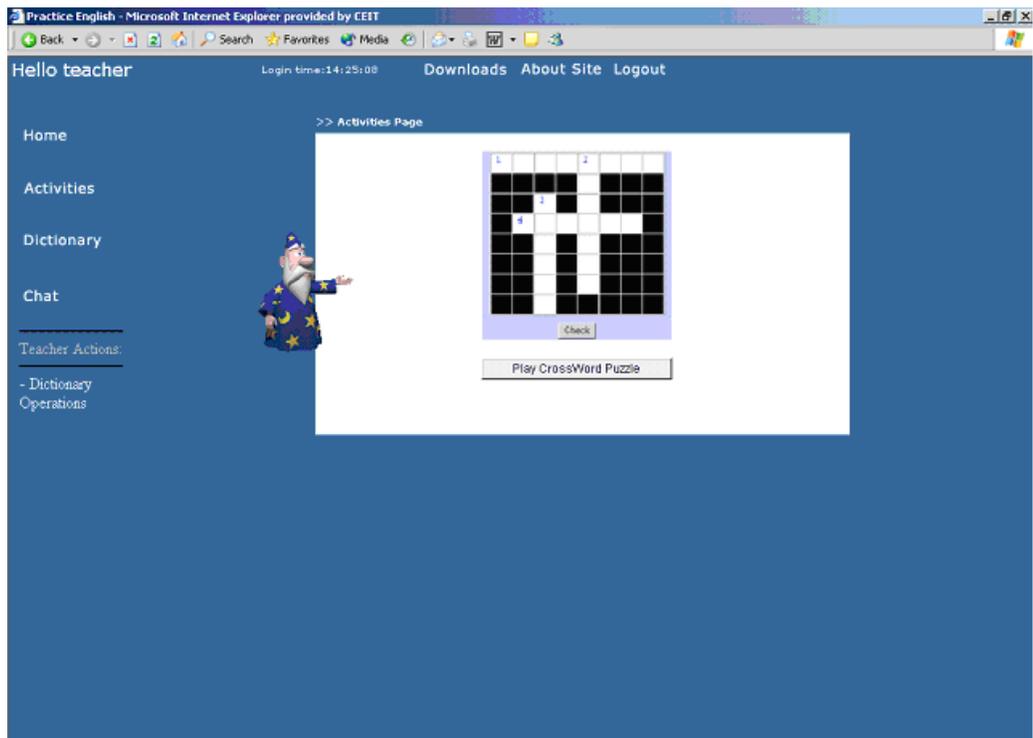


Figure 4 – Web-based Learning Tool Activities Screen

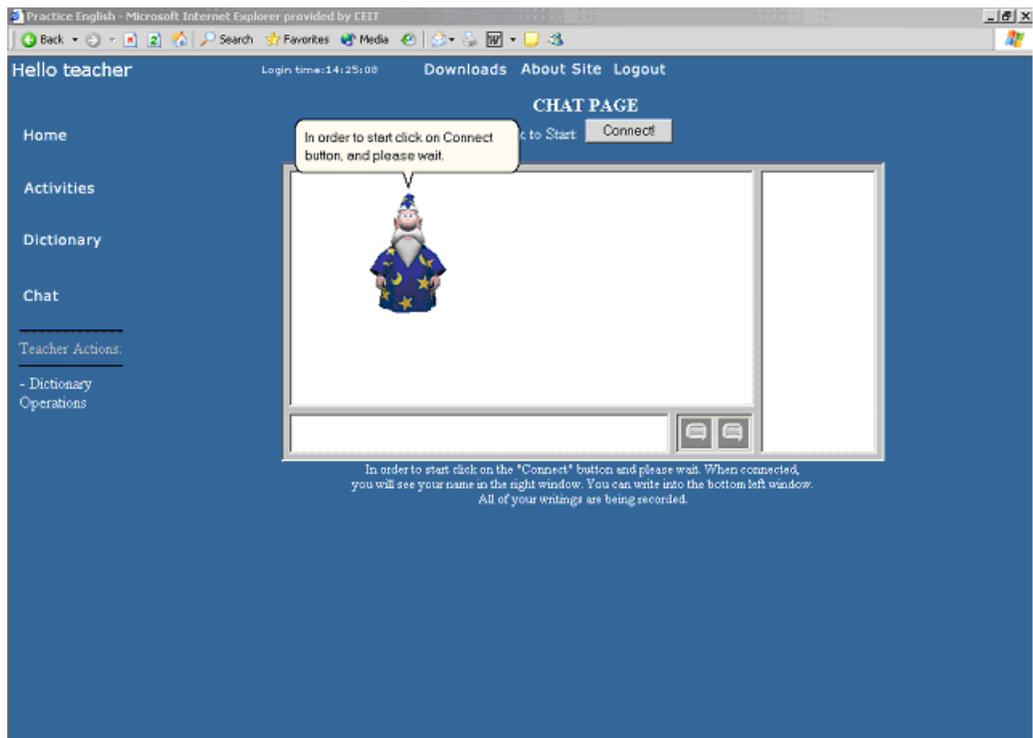


Figure 5 – Web-based Learning Tool Chat Screen

Practice English - Microsoft Internet Explorer provided by CEET

Back Search Favorites Media

Hello teacher Login time:14:25:08 Downloads About Site Logout

DICTIONARY OPERATIONS

ENTER NEW WORD

Word:

Explanation:

Show in dictionary:

Submit Reset



EXISTING WORDS

Words	Explanation	Show	Update	Delete
FAMOUS	known by a lot of people	<input type="checkbox"/>	Update	Delete
POPULAR	liked by a lot of people	<input checked="" type="checkbox"/>	Update	Delete
WIN	to get the most point in a film	<input checked="" type="checkbox"/>	Update	Delete
BEAT	to defeat your opponent	<input checked="" type="checkbox"/>	Update	Delete
EARN	to get money by working	<input checked="" type="checkbox"/>	Update	Delete
GAIN	to get something useful or valu	<input checked="" type="checkbox"/>	Update	Delete
EVIL	bad	<input checked="" type="checkbox"/>	Update	Delete
TIMELIGHT	in public attention	<input checked="" type="checkbox"/>	Update	Delete
PITCH	football field	<input checked="" type="checkbox"/>	Update	Delete
RECKON	to account	<input checked="" type="checkbox"/>	Update	Delete
FAN	the person who loves/admires	<input checked="" type="checkbox"/>	Update	Delete

Teacher Actions:
- Dictionary Operations

Figure 6 – Web-based Learning Tool Dictionary Operations Screen