ISSUES IN THE DESIGN AND IMPLEMENTATION OF WEB-BASED LANGUAGE
COURSES

A MASTER'S THESIS

by

AZRA NİHAL BİNGÖL

THE DEPARTMENT OF
TEACHING ENGLISH AS A FOREIGN LANGUAGE
BILKENT UNIVERSITY
ANKARA

July 2003

To my beloved family, Bülent, Mualla and Sibel Bingöl

ISSUES IN THE DESIGN AND IMPLEMENTATION OF WEB-BASED
LANGUAGE COURSES

The Institute of Economics and Social Sciences
Of
Bilkent University

by

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I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Teaching English as a Foreign Language.

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ABSTRACT

ISSUES IN THE DESIGN AND IMPLEMENTATION OF WEB-BASED
LANGUAGE COURSES

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Master of Arts in Teaching English as a Foreign Language

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This study explored the factors that course designers have taken into account in the design and implementation of web-based courses, how the design and implementation of the web-based courses were effected, and course designers' views of possible future directions for developing and implementing web-based courses. From the results of this study, some recommendations are made for Bilkent University School of English Language (BUSEL), which is thinking of designing and implementing web-based courses in an English for Foreign Language (EFL) setting.

Nine English Language Teaching (ELT) professionals, from different institutions inside and outside of Turkey, participated in this study. A questionnaire was sent to eight participants through email in four different sections. One participant was interviewed as she lives in Ankara, Turkey. The interview consisted of the same questions as the questionnaire.

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The questionnaire and the interview results were analyzed qualitatively. The data analysis was based on the interpretation of the interview data and the interpretations of patterns emerging from participants' responses.

The data results reveal that it is important to take student concerns, technical concerns, and pedagogical concerns into consideration before designing and implementing web-based courses. The results especially suggest a need for teams of teachers to work together to reduce potential problems in their areas and maximize efficiency in the process. They also call for both teachers and students to receive orientations into the process of web-based instruction before commencing it.

Key words: Distance education, Internet, World Wide Web, Web-based instruction, CmC (Computer Mediated Communication) tools.

ÖZET

WEB DİL KURSLARININ DİZAYN VE UYGULAMASIYLA İLGİLİ KONULAR

Bingöl, Azra Nihal

Yüksek Lisans, Yabancı Dil Olarak İngilizce Öğretimi

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Bu çalışmada web dil kurslarını dizayn eden ve uygulayan kişilerin gözönüne aldıkları faktörleri, web kurslarının dizayn ve uygulamasının nasıl gerçekleştiğini, ve web kurslarını hazırlayanların bu kurslarının geliştirilmesi ve uygulanması konusunda gelecekteki gidilecek olası uygulamalara dair görüşlerini araştırılmıştır.Bu çalışmanın sonuçlarına dayanarak EFL alanında web kursları hazırlamayı düşünen BUSEL için bazı önerilerde bulunulmuştur.

Bu çalışmaya Türkiye'de ve dış ülkelerde çalışan dokuz ELT uzmanı katılmıştır. Anket sekiz katılımcıya elektronik posta yoluyla dört farklı bölüm olarak gönderilmiştir. Katılımcılarda biri ile Türkiye'de Ankara'da yaşadığı için röportaj yapılmıştır. Röportajda anketteki soruların aynısı sorulmuştur. Anketin ve röportajın sonuçları niteliksel olarak analiz edilmiştir.Veri analizi röportajda elde edilen verilerin ve katılımcıların yanıtlarında ortaya çıkan konuların yorumlanmasına dayanmıştır. Veri analizi web kurslarının hazırlanması ve uygulanmasından önce öğrencilerle, teknikle ve pedagojiyle ilgili konuların gözönüne alınmasının önemini ortaya çıkarmıştır.

Sonuçları özellikle öğretmenlerin ortaya çıkabilecek olası sorunları azaltmak ve süreçteki etkinliği maksimum seviyeye çıkarmak için takım halinde birlikte çalışmalarının gerekliliğini ortaya koymuştur. Sonuçlar ayrıca hem öğretmenlerin hem de öğrencilerin webe dayalı öğretime başlamadan önce bu süreçle ilgili olarak yönlendirilmesi gerektiğini göstermektedir.

Anahtar kelimeler: uzaktan eğitim, internet, dünya çapında web, webe dayalı eğitim, bilgisayarla ileşim araçları

ACKNOWLEDGEMENTS

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CHAPTER 1: INTRODUCTION

Introduction

This research is a multiple case study that focuses on the design and

implementation of web-based language courses and what can be learnt from the

experiences of English language teaching professionals who have been involved in

web-based instruction (WBI) in these areas. The specific aims of the study are to

determine the factors that the course designers have taken into account in the design

and implementation of web-based courses, how the design and implementation of the

web-based courses were effected, and course designers' views of possible future

directions for developing and implementing web-based courses. The study was

carried out with a group of teachers who have designed and implemented web-based

courses in English as Foreign Language (EFL) settings. The data collected from

these participants is used to make recommendations for Bilkent University School of

English Language (BUSEL) in anticipation of the development of web-based

instruction there.

Background of the Study

Computer technology has brought the Internet and the World Wide Web

(WWW) to educational settings. As use of and access to the Internet and the WWW

have increased, educators have realized their potential for changing educational

practices through the support of web-based instruction (WBI). Khan (1997) defines

web-based instruction as a "hypermedia-based instructional program which utilizes

the attributes and resources of the World Wide Web to create a meaningful learning

environment where learning is fostered and supported" (p. 6).

The WWW is a popular tool in language teaching because the WWW enables greater distance education. The Web/Internet plays a crucial role in web-based instruction by providing new modes of communication and information retrieval and allowing educators to explore new pedagogical possibilities and resources in the teaching-learning process (Wood, 1999). Distance education through WBI allows for flexibility and innovation in instruction which may meet the needs of students more effectively than current face-to-face methods. Through distance learning, many people who cannot attend courses regularly have the chance to attend web-based courses in order to complete their higher education. The expanded possibilities for distance education which WBI has created may help promote greater learner autonomy, defined as a "capacity for detachment, critical reflection, decision-making, and independent action" (Little, 1991, p. 14). One of the aims of new teaching pedagogies, including WBI, is to help students take control of their own learning. In a non-face-to-face environment, learners have the possibility to make their own choices and affect learning outcomes, which can increase learners' self-esteem and motivation positively. However, for this to be successful, concerns about course design must be met.

Educators and researchers are exploring and developing new instructional design models and frameworks for web-based courses. When educators decide to use the Internet for web-based courses, one of the issues they have to take into consideration is the quality of the course that they are going to design (Kang, 2001). Course designers need to be careful when they are designing and implementing their web-based courses as this process is an emerging field in education and there are not many sources to consult when designing a web-based course. Wood (1999) believes that web-based instruction improves educational outcomes to a certain extent, but it

also poses great challenges to educators from the point of view of course design. Designing and implementing a web-based course also increases the workload of designers and the teachers who implement it because of the need to rely directly on new technology.

While preparing a web-based course, it may be useful to ask other more skilled web-based course designers to evaluate and comment on their own experiences in developing and implementing web-based courses. The experiences of web-based designers and implementers can be a valuable source of information for individuals wanting to make use of this new instructional medium. According to Saracho (1987), evaluation of web-based courses, a crucial step for improving an educational program, can help the other designers learn what to do and not to do while designing their own web-based courses. Learning about the problems associated with web-based courses might be beneficial to new course designers; with the knowledge, they can try to avoid and not repeat the problems of others in new web-based course designs. With the help of solutions that have already been found, new and existing web-based courses can be improved for better instruction.

Statement of the Problem

In Turkey, there is a growing awareness of the usefulness of computers in foreign language teaching and learning. Many people, including language teachers and administrators, have recently begun to realize the potential of web-based courses. Therefore, they want to diversify foreign language education by adding this new element to their language teaching curriculum. Yet, because web-based instruction is a new concept in the Turkish education system, few educators have been involved in the process of designing web-based courses, leaving very few individuals who are fully prepared for designing courses. New designers need to be sure of why they

want to implement web-based teaching and how they can implement it in their institutions (Kang, 2001). Although there have been some studies about the design of web-based courses, little has been done to identify the factors effecting the design and implementation of web-based courses in higher education in the literature.

Bilkent University School of English Language (BUSEL) is interested in designing web-based courses for its students. Computers in BUSEL are not currently used for web-based teaching, but instead are generally used to give students access to materials directly relevant to their courses and exercises, including exam type material. Students are taken to the computer lab once or twice a course at BUSEL, and they are expected to visit the computer lab after classes to practise more on their own. However, administrators would like to explore and develop some new instructional design frameworks for online web-based courses since web-based courses offer many opportunities for forming collaborative learning communities.

The web-based course designers at BUSEL have general aspirations, but there is no exact WBI model in their minds. Therefore, they need to look elsewhere and learn from the others; the best place to turn is to other designers who have designed and implemented similar web-based courses. The first step that has to be taken in order to design courses for web-based instruction is to find out about programs that have the same general aims and explore the steps that have been taken to design and implement web-based courses in them. This form of investigation can be beneficial since the experiences of others, both positive and negative, can offer insights to professionals interested in pursuing similar paths. For this reason, it might be logical to conduct research asking WBI designers how they have designed and implemented their web-based courses.

RESEARCH QUESTIONS

1   What factors have course designers taken into account in the design and
     implementation of web-based courses?

2   How were the design and implementation of the web-based courses effected
     by these factors?

3   Where do the course designers see themselves going in the future in web-
     based course design?

Significance of the Problem

According to Owston (1999), web-based courses are growing in number

around the world and there are many indications that the trend will continue for

the foreseeable future. Many institutions have moved their traditional

correspondence offerings to the Web and many others are planning to do the

same. Although there is the widespread adoption of web technology by

educational institutions, we know very little about the process of developing

web-based courses and their implementation. The study may be helpful in the

sense that it will add to the literature on the factors to be considered in designing

effective web-based courses, the processes that should be followed when

designing web-based courses, and future directions for web-based courses.

The study will also be beneficial for educators at BUSEL who want to

design web-based courses because they may not know where to start and what to

build on. The educators who will design and implement web-based courses at

BUSEL can use the results of this study as a guide and follow the processes

described while designing and implementing their web-based courses. They may

avoid pitfalls encountered by others by becoming aware of problems associated

with web-based course design and the solutions tried on by others. It may also

help people who want to evaluate their already existing web-based courses in Turkey since they can use the results of this study as a checklist to evaluate their web-based courses and improve them.

Key Terminology

Distance Education: Distance education "takes place when a teacher and student(s) are separated by physical distance and technology (i.e., audio, video, data, and print), often in combination with face-to-face communication, is used to bridge the instructional gap." (Willis & Dickinson, 1997, p. 81). Since distance education is different from traditional classroom teaching, it requires special design techniques, special methods of electronic communication and use of other technology, and special organizational and administrative arrangements (Moore & Kearsley, 1996).

Internet: "A global telecommunications network based on satellite and ground relays. Originally conceived of as a research tool and means to connect academics in universities, institutes, and government, the Net is now accessible by any individual through commercial service providers" (Hanson-Smith, 1997, p. 16).

World Wide Web: "A hypertext-based, distributed information system that allows users to create, edit or browse hypertext documents that include images, sound and video. The World Wide Web is one of the most popular and useful information-sharing tools on the Internet. The Web is usually accessed using a Web browser" (Harrington, Rickly, & Day, 2000, p. 384).

Web-Based Instruction: "A hypermedia-based instructional program which exploits the resources of the World Wide Web to create a meaningful learning environment where the learning is fostered and supported" (Khan, 1997).

CmC tools: These are Computer-Mediated Communication techniques such as email, discussion lists, text-conferencing (Internet Relay Chat), MOOs, and audio- and video-conferencing.

Conclusion

In this chapter, a brief summary of the issues related to web-based instruction was presented. The statement of the problem, research questions, the significance of the study and key terms were covered as well. The second chapter is a review of literature on web-based instruction. In the third chapter, the participants, materials, and procedures followed to collect and analyze data are presented. In the fourth chapter, findings are presented. In the fifth chapter, a summary of the results, implications, recommendations, and suggestions for further research are provided.

CHAPTER 2: LITERATURE REVIEW

Introduction

This study is a multiple case study that focuses on designing and implementing web-based courses and what can be learnt from the experiences of English language teaching professionals with their web-based courses. The specific aims of the study are to determine the factors that course designers have taken into account in the design and implementation of web-based courses, how the design and implementation of the web-based courses were effected these factors, and course designers' views of possible future directions for developing and implementing web-based courses. The study was carried out with a group of teachers who have designed and implemented web-based courses in English as Foreign Language (EFL) settings. The data collected from these teachers used to make recommendations for Bilkent University School of English Language (BUSEL) in anticipation of the development of web-based instruction there.

This chapter reviews the literature about technology in education, the Internet, web-based instruction (WBI), course design in WBI, and implementation of WBI.

Technology in Education

Technology has been an invaluable element in education for many years. Developments in technology have enhanced language education by supporting changes in pedagogy. Tape recordings, television and videos, and computers are among the technological devices that are used for language teaching. The popularity of these tools has depended in part on their availability at different times and also on the approaches and methods in language teaching in vogue at those times. In some

cases, in fact, the availability of particular technologies has helped drive the choice of teaching methods.

The use of tape recordings in language instruction became popular when behaviorism was adopted by the language teaching profession as a psychological basis for understanding the teaching/learning process after World War II. Behaviorists saw learning as a process of habit formation through repetition of appropriate stimuli, the correction of inappropriate responses, and reinforcement of correct ones. This stimulus-response-reinforcement model formed the basis of the audio-lingual method of language teaching. The audio-lingual method supports drilling students followed by positive or negative reinforcement. Correct utterances were immediately praised whereas mistakes were immediately criticized. Constant repetition through drilling and the reinforcement of the teacher formed the language 'habit' (Harmer, 1983). The availability of tape recorders gave teachers a tool which enabled consistent drilling of correct forms. Students would listen to the tape recordings of well-formed sentences again and again in order to form good linguistic habits.

Tape recorders and tapes remain in use today as sources of spoken language in many classrooms because they are cheaper and easier to use than other sources of technology that have followed them. However, audio equipment cannot provide the visual content that became available through television and video (Ur, 1996).

Television and video became popular tools for language learning in association with the emergence of the communicative approach to language teaching in the 1970s. In the communicative approach, interaction and the development of the ability to use language in real contexts is emphasized. Television and video are models of authentic language use; they motivate learners through the visual

presentation of interesting materials and provide opportunities for autonomous learning. Meinhof (1998) notes that television and video can introduce students to authentic language use and the cultural environments of target language use, thereby providing models of real communication. When learners watch movies on videotape, for example, they are exposed to authentic language use and can learn about appropriate non-verbal behaviors along with the language. In addition to that, the visual presentation of interesting materials through television and video motivates learners as they are learning authentic language use and behaviors.

The use of television and video can also promote learner autonomy. Learners can profit from these tools by themselves, without a teacher. They can watch TV programs that are designed specially for distance education without having a teacher. There are also videotapes that are produced to support language learners who want to improve their knowledge. In addition, the visual nature of these tools, supported by audio and visual images, as well as their interesting content, can motivate learners to make independent use of them.

However, television and video have some disadvantages associated with them (e.g. cost, immobility). They both require costly equipment. Because most language programs cannot afford to supply each and every classroom with needed equipment, it is often the case that classes need to be taken to video rooms and these rooms have to booked beforehand. In addition to that, there can be breakdowns and technical problems, common with all technical tools (Ur, 1996). If the student is working on his/her own, s/he may feel isolated since there will not be any person to person interactions, like in the classroom environment.

Computers have developed rapidly since the 1980s as tools for language instruction. The development of the personal computer (PC) has led to a powerful,

fast, and reliable resource that is more accessible and easier to use than TV and video. While promoting learner autonomy, as television and video did, PCs offer certain advantages, including greater flexibility in accessing instructional materials and processes. The greatest advantage, though, is that PCs can be networked to allow interactive learning.

Computers are powerful and fast; they have great memory capacities to store large amounts of information and it takes little time to access the information they have. The memory capacity and speed of computers continue to increase and they have become more specialized. More recently computers offer even more resources through multimedia that engages written text, sounds, still pictures, and video using computers and networks (Kitao, 1996). Multimedia software became more practical in the early 1990s, giving people access to CD-ROMs that can store whole encyclopedias and language courses with text, graphics, and audio or video. Such commercial products have taken their places at many schools because they are professionally produced, reliable, and easy to use (Windeatt, Hardisty, & Eastment, 2000).

Learner autonomy is emphasized through using computers as an instructional tool. Computers enable learners to work at their own pace. When using computers, learners are aware of the fact that they are in charge of their own learning and they perceive teachers as facilitators in their learning progress (Yumuk, 2002).

> Unlike a lecture or a television program the computer lesson
> advances at the student's own learning speed. Furthermore,
> computer programs can be designed to assess how well the student
> mastered each step in the learning sequence so that before the
> student advances the next step, the computer can provide remedial
> teaching of any part of the present segment that the learner has not
> yet mastered. (Thomas & Kobayashi, 1987, p. 5-6).

Computers, with the Internet that has "hyper-linking capabilities to sources from all over the world" (Yumuk, 2002, p. 142-143), enable learners to gain instant access to an enormous amount of knowledge. This feature may also increase learners' desire, curiosity, and motivation. The Internet provides learners with an easy-to-use tool to find the most recent information in a short time. Computers also provide authentic material through the Internet and World Wide Web (www). Learners may feel independent since they select "the most recent, useful and applicable materials" on their own and decide how to use them for their learning. Therefore, computers enable learners to make decisions actively for their own learning (Yumuk, 2002).

Computer networking, involving communication between or the sharing of resources by two or more different computers, has added new dimensions to educational technology as well. Individual computers can send files or messages back and forth between computers on the network. It is possible to have a class of geographically separated students with the help of such networks as these networks can provide connections to large information systems. Computers can also provide computer bulletin boards which make it easy for students to share ideas or problems (Coburn, Kelman, Roberts, Snyder, Watt, & Weiner, 1985).

The Internet, defined as "a system linked computer networks, worldwide in scope, that facilitates data communication services such as remote login, file transfer, electronic mail, and distributed newsgroups," is another useful technological tool for teaching (Pfaffenberger, 1993, p.330). Today, many teachers and students use Internet resources such as email, discussion lists, text-conferencing, audio and video conferencing, bulletin board systems, and WWW all around the world. There are many ELT sites such as Dave's ESL Café, Digital Education Network, the Linguistic

Funland TESL and mailing Listservs such as TESL-L, TESLCA-L, and NETEACH-L that were all created by educators (See Appendix A for the web addresses). Resources are also available through WWW, AskERIC and online chat groups like MOOs and mIRC (Windeatt, Hardisty, & Eastment, 2000). Through the Internet teachers can gather information for their classes; including lesson plans and materials that can be used in class. They can interact with other teachers and exchange ideas when they subscribe to mailing lists related to TEFL/TESL. They can also stay up to date on new trends of English teaching by subscribing to electronic journals or newsletters, e-mailing, or using the WWW (Kitao, 1996).

The Internet

According to Pollacia and Simpson (2001), the emergence of the Internet is one of the most dramatic trends in higher education since the Internet permits students interact with one another around the world cheaply and quickly. It also opens up the classroom to the real world, a phenomenon that had never been possible before. Because the Internet is such a powerful tool for information and communication, many people believe that there should be much more integration of computer work into language curricula. The Internet can be used as a source of expanded material for learning and teaching. It provides quick and convenient access to learning possibilities including audio and video communication in ways that have never been practical before (Windeatt, Hardisty & Eastment, 2000).

The Internet has enormous potential in language learning, but its effectiveness in practice depends greatly on the way it is exploited by the teacher and the students. As with any kind of teaching tool, methodology plays a crucial role in language teaching through the Internet. Teachers who would like to incorporate the Internet into their teaching can take advantage of a number of tools for increasing

interaction and bringing the real world into the classrooms. These tools include use of e-mail, electronic discussion lists, chat rooms and the WWW (Windeatt, Hardisty & Eastment, 2000).

Globally, many people use e-mail (electronic mail) today, as a common way of communication. It is a way of sending messages to communicate with individuals from one computer to one or more computers around the world. Using e-mail is quite popular in web-based learning environments. Warschauer sees its use as "an excellent opportunity for real and natural communication" (as cited in Carrier, 1997, p. 284). Teachers also use it for exchanging ideas and collaboration all over the world. Students can communicate and share opinions and feelings with their teachers and other students from another part of the world. Beatty (2003) also mentions one of the greatest advantages of emailing, which is "the record of both one's own messages and the messages one receives" (p. 62). Emailing, as an asynchronous way of communication, enables students to read what they have sent and received whenever they want as long as they save their emails. Asynchronous email lets the students take their time to think about their message and compose it accordingly, and the message can reach the person despite differences in time zones (Beatty, 2003).

Another use of emailing is "keypals" or "Net pals." This is an informal use of emailing as an email pen pal arrangement. This generally happens between someone who is learning a second or foreign language and a native speaker of the target language living in the target language culture. The native speaker models the authentic use of the language for the learner. Net pals function best when both participants have a common interest to share, otherwise communication could be frustrating for learners since they could think that their level of English is insufficient.

Electronic discussion lists represents another type of internet access. Teachers and learners can pose a question and then receive hundreds of responses to their question in a short time. They can reach the information they need with the help of the lists. As Gear (1999) mentions, these lists, which she calls "a mass mailing" (p. 68), are valuable since people can discuss issues, ask questions, and give and receive information. After the message is emailed to a certain address, people in the list send responses, essentially to people who share the same interests.

Another form of internet access is the Internet chat groups or as Beatty (2003) says "chatlines." Beatty (2003) defines chatlines as follows:

> A chatline refers to *Internet Relay Chat* (IRC) and appears on-screen as a window that presents what the learner is writing in one pane while general discussion among other participants continues in another. Once the learner has completed a message and presses the *send* command, the message is queued and appears in the main pane as quickly as the modem and host computer allow (p. 64).

Internet services let people all around the world chat together synchronously. Chat groups can be used by teachers so that students can have real-time electronic discussions and question and answer sessions on the Internet. There are many well-known chat servers such as MOO (Multi-user domains, Object Oriented) and IRC (Internet Relay Chats) on which people have live communication during which they share common interests and talk about them. According to Beatty (2003), the advantage of such environments for language learning is that learners are in an environment where the target language is spoken and they interact with others using the target language.

The World Wide Web (WWW) is another type of internet tool that includes an enormous amount of information in text, audio, and video forms (El-Tigi & Branch, 1997). According to Starr (1997), the WWW is one of several services, actually the most fascinating one, on the Internet and it is mainly responsible for the

incredible increase in Internet users. In addition to that, McManus (1996) states that the Internet is one of a teacher's most important tools and adds that the WWW is the easiest and most popular way to access the Internet. The increase in resources on the Web also takes the attention of educators because of its great potential for instruction. The WWW delivers information in response to learner searches in an easy way, making the WWW attractive for students and teachers alike. McManus (1996) defines the Web as "delivery medium, content provider, and subject matter all in one" and adds that teachers and designers can create maps to guide their learners through this new world geography using the Web.

Learners can surf the Web for virtually unlimited information that they want to find with a browser program and an internet connection. They can reach information from a university database, a newspaper, or an email from someone. The sources on the WWW can improve the level and the quality of learning. However, the quality of these sources needs to be scrutinized because anyone in the world with the technology who knows how can place information on the web. Learners can improve not only their reading and writing skills, but also their research skills with the help of the authentic materials on the WWW. Moreover, since they can be exposed to different cultures on the web, their understanding of different cultures can also be improved (Carrier, 1997).

Web-based Instruction

Web-based instruction (WBI) is a rising field in education and the rapid growth of the Internet has played the greatest role in this emergence. Many universities are changing their communication structure to extend beyond traditional boundaries in order to reach students from all over the world. Web-based instruction provides course material and instruction to students at their homes; this helps to

reduce physical and environmental burdens that are imposed by student travel (Ritchie, Hoffman, & Lewis, 1996). According to McManus (1996) the Web, with all its usefulness and interconnectedness, offers one of the most effective ways to work with learners who are wide spread geographically. Students who live in different parts of the world can attend web-based courses as long as they have access to the Internet. Therefore, WBI breaks the borders of the classroom and opens the classroom to everyone.

According to Henke (1997), WBI has led to the growth of distance education as a reliable and inexpensive way to disseminate information, when compared with live broadcasts, videotapes, and computer-based training. WBI enables learners who prefer to learn outside of traditional classrooms to attend classes at their homes or offices (Bannan & Milheim, 1997).

As Fisher mentions (2001), the center of attention has moved from computers in the classroom towards using the World Wide Web for instruction. Today's "Net-centric" generation students have more experience than the older generation in technical issues related to computers (p. 107). The common complaint these students have is that many web-based resources are not designed well enough to use and explore. When they are in a web-based learning environment, students begin to expect high levels of interactivity. In response to such student expectations, teachers need to be prepared to think critically about WBI resources and their own ability to design and illustrate concepts with interactive media on the web.

Many educators are enthused about the Web, but, according to Fisher (2001), a main concern is the quality and efficiency of instruction being delivered in this manner. A large number of instructors are using Web sites that have not been evaluated by organizations to judge theoretical and instructional suitability. Web

curricula affect the way in which education is delivered to learners. Educators are using Web sites frequently instead of traditional content media (e.g. texts) and instructional approaches (e.g. lectures). Web curricula, as a new teaching approach, raise the questions related to instructional design principles, learners' strategies, human-Internet interaction factors, and instructional characteristics of Web media.

WBI, when designed efficiently and effectively, enables students to become more independent and autonomous learners. Online-learning opportunities provide students with ideas to be explored and resources to be compared and synthesized. Students also revise their ideas through the creation of reports, and Web pages or comments on digital texts. Moreover, they improve their problem solving and reasoning skills through electronic discussions. Their critical thinking skills improve and they may be able to work on their own without a teacher, but with a facilitator (Yumuk,2002).

Teachers need to design Web resources in a way that improves their teaching in order to engage learners and activate their autonomy. After gathering more and better information at Web sites, teachers integrate them into their curriculum effectively. The efficient teachers are the ones who can design activities and compose sets of tasks that encourage student autonomy for learning.

Course Design

When designing a course, course designers must take several issues into consideration. These issues include determining learners' needs, setting goals and objectives, deciding which materials, teaching techniques and assessment procedures to use, and how to evaluate the course.

Meeting learners' needs is the first concern in course design. Before starting to design a course, course designers need to find out what abilities learners need to

develop in the target language. The purpose of the needs analysis is to find out learners' abilities, attitudes, and preferences before the course and also the desired abilities and the outcome after the course. Brown (1995) explains needs analysis as "the activities involved in gathering information that will serve as the basis for developing a curriculum that will meet the learning needs of a particular group of students" (p. 35). Graves (2000) defines needs analysis as "a systematic and ongoing process of gathering information about students' needs and preferences, interpreting the information, and then making course decisions based on the interpretations in order to meet the needs" (p. 98). Brown names learners as "the clients whose needs should be served" (p. 20) and adds that teachers, administrators, employers, institutions, societies and nations also have needs that should be taken into consideration in the teaching and learning process. With these issues in mind, designers can decide on what will be taught, how it will be taught, and how it will be evaluated (Graves, 2000).

After the needs analysis, the statements of needs turn into program goals and these goals turn into clear objectives. This is an effective way to make clear what should be in a language classroom. Goals, according to Brown (1995), are general statements about what needs to be accomplished in order to meet students' needs. Goals show the aim of the course and are future oriented. When course designers state their goals, these goals make it easier for them to focus on their visions and priorities for the course. He defines objectives as 'precise statements about what content or skills the students must master in order to attain a particular goal' (p. 21). Objectives are related to the goals of the course because objectives, as Graves (2000) defines them, are statements about how the goals will be attained.

Materials are another component of course design. Materials development, for a teacher, means deciding on, adapting, adopting, creating, and organizing materials and activities for students to achieve the objectives of the course. Materials development includes decisions about the materials that will be used, such as textbook, texts, pictures, supplementary materials, and video. In addition to these, it is also important to design the activities that the students will do and how these materials and activities are organized in a lesson (Brown, 1995, Graves, 2000). The materials that are developed by teachers reflect teachers' beliefs about teaching and learning a language. Therefore, it can be stated that the process of materials development includes deciding how to put teachers' principles into practice (Graves, 2000).

Teachers and students should know the objectives of the course and how students will be assessed at the end of the course. Teachers also need to be involved in the course design process actively as it is teachers' responsibility to select and develop course materials and tests. Objectives, tests, and materials development need group work, as they require expertise, time and energy from everyone involved in the program. This will also allow teachers to do their primary job, teaching, effectively and efficiently (Brown, 1995). Teachers who work individually may lack time and expertise to do an adequate job. Teachers can concentrate more on teaching when the workload is shared and teacher can spend his/her time on individual students.

Testing has interrelated roles in course design. Graves (2000) defines these roles as assessing needs, which was mentioned at the beginning of this section, assessing students' learning and evaluating the course. Assessing students' learning has four major purposes: assessing proficiency, diagnosing ability and needs, assessing progress and assessing achievement. While assessing proficiency, teachers

want to find out what the learners are able to do with the language. Assessing proficiency provides a starting point as it gives an idea of the learners' ability levels. This is essential for course design so that goals and objectives can be clarified with respect to the level of difficulty in the target skills. Diagnostic assessment is used to find out what learners can do or cannot do with a skill, task or content area. Assessing progress helps to discover what students have learnt during the course at particular times. It is important to assess only what has been taught. Assessing achievement is done at the end of a course or a unit to assess what students have mastered with respect to the knowledge and skills that have been taught during the course (Graves, 2000).

Evaluation is the last important component of course design. Brown (1995) defines evaluation as "the systematic collection and analysis of all relevant information necessary to promote the improvement of the curriculum and to assess its effectiveness within the context of the particular institutions involved" (p. 24). Evaluation of a course is not an end of course assessment, but it is an ongoing needs assessment of course design. Program evaluation involves an on going process of information gathering, analysis and synthesis to improve the quality of the course design for the future.

<div align="center">Course Design in WBI</div>

In order to design an effective web-based course, there are issues that teachers should consider in detail such as careful planning and design, students' needs, and institutional support.

As McCormack and Jones (1998) state, "a number of skills, a fair amount of time, and a reasonable level of resources" are needed in order to develop an appropriate web-based classroom (p. 17). Most educators aspire to use an effective,

<div align="center">21</div>

efficient, and enjoyable teaching approach, but many existing approaches have problems that can unfavorably influence these aspirations. New instructional approaches, including WBI, offer distinctiveness that make it possible to smooth the progress of these aspirations more easily.

Planning and designing are the first steps in implementing web-based instruction, as they are crucial in any pedagogical activity or project. They may be more essential for a computer-based course. Planning helps educators decide what they want to do with WBI and how they will achieve it. The design of WBI helps educators define its structure and appearance. Pollacia and Simpson (2001) mention "careful planning, a focused understanding of student needs and the course requirements are crucial for the development of an effective distance education program." (p. 32). Lack of planning may lead to an ineffective use of class time and poor instructor evaluations. In order to use computers in education effectively, as in the traditional courses, course goals have an essential place. The ways in which technology is used should be considered carefully as these ways will help students meet those goals.

Even though technology has a vital part to play in web-based delivery, educators must focus on instructional outcomes first instead of the technology of delivery. Important elements of an effective online program are the focus on learners' needs, the requirements of the content, and the constraints that are faced by the teacher. Selecting a delivery system and the appropriate technologies can come after these issues (Pollacia & Simpson, 2001).

In addition, Owston (1997) mentions that there is no medium that will likely develop learning in a considerable way when it is used to deliver instruction. It is not realistic to believe that the Web, as a learning and teaching tool, will develop unique

skills in students. The key issue is that if the promotion of improved learning with the Web is desired, it is rational to think how effectively the medium is exploited in the teaching-learning situation.

Because students are the primary audience, the design of WBI should be simple and thoughtful, to actively engage students and prevent frustration (Isbell & Reinhardt, 2000). Students give more importance to the self-directed nature of on-line activities than to the perceived difficulty of the tasks. This student orientation has implications for design. When teachers give more attention to a user-friendly design, and provide better explanations about the on-line activities initially, students perceive learning through them to be less difficult. If an on-line course helps students stay organized and focused throughout the semester, students like the on-line course more than other courses. Another important factor that affects students' motivation is a sense of ownership. If students feel a certain degree of ownership of the web course page, they may become more likely to use it (Isbell & Reinhardt, 2000). Some students, who have little previous experience with computers, may lack confidence to explore a Web site; thus, some time should be given for the students to become familiar and comfortable with the Web site. An orientation program that trains students on the basics of computer skills which will be needed during the course may be beneficial for students before they start a web-based course.

Technology is an element in classroom and curriculum design, and when this element is implemented well, it can have beneficial effects. However, if it is implemented badly, it can also have disastrous effects. Teachers can shape the uses of technology in their own environment. In order to use technology effectively, teachers need support from their departments, which should value technology and provide a good infrastructure for technical support. With or without administrative

support, teachers can do their best to create their own support network by forming

formal and informal groups to discuss teaching strategies (Harrington, Rickly, &

Day, 2000).

Computer networks themselves are value neutral; any positive or negative

results from their use are the consequences of the activities that occur on them. When

thoughtful teachers and students work together, positive affects are the outcome.

Networks create a new sense of shared public space where healthy and respectful

debate can grow. These debates are crucial for critical pedagogy. Teachers need to be

aware of networks' ongoing evolution. In addition, teachers need to be actively

involved in the construction of software, cyber classrooms, and pedagogical sites on

the Internet. Without teacher involvement there will not be any control over the

educational resources that are developed (Harrington, Rickly, & Day, 2000).

While designing a web-based course, the teacher has an important role to play

as a designer, requiring a strong commitment on the part of the teacher. Having a

syllabus and a list of course-related on-line material is not enough. There are many

factors that need to be considered carefully in developing a course on the Web. For

example, careful link placements can add structure to a page. Too many links on one

page can be puzzling and too few links eliminate the sense of interactivity. It would

always be better for a teacher-designer to test a new page or a site by going through

the page and available links from the user's point of view. It is also important not to

overwhelm students with texts, especially students with low-level language skills. It

is good to keep the language level appropriate and put all the important information

at the top of the page. It is generally better to split up text or instructions into several

pages and it is advisable to give students a sense of accomplishment as they navigate.

(Isbell & Reinhardt, 2000).

Implementation of WBI

Implementation issues in WBI are similar to design issues in WBI; in many ways as they are interrelated. Implementation issues in WBI mainly relate to student concerns and teacher concerns. Student concerns include learners' attitudes towards WBI, learner awareness and autonomy in WBI, the skills that learners' need, and the challenges of WBI. Teacher concerns relate to teacher preparation and teamwork.

Although it has been stated that learners might feel alone in an online class because they do not have opportunities to meet their peers and teacher like they do in a face-to-face classroom, Barnard (1997) disagrees with that statement. He believes students who are shy or introverted might open up more in an online course. He adds that many students feel more comfortable in expressing their ideas and thoughts in WBI after some reflection time. In addition to that, students all have equal opportunities to participate, unlike in a traditional classroom where some students dominate classroom interactions. However, Nunan (2002) states that students might be reluctant to participate actively in an online course, especially at the early stages since they are new to WBI. They may not feel they are compatible enough and if there are more experienced students in the same course, the situation could be worse. Nunan (2002) states that this problem can be solved by developing " a student host system" and also requiring all students "to lead the class at least once during the course" (p. 619). By taking such steps, the students might be encouraged to become more active members in their learning environments. Harrison and Bergen (2000) add that it would be beneficial to ask students to send a message in which they introduce themselves to their peers as the first online assignment. Such introductory activities can help students find peers who have similar interests or studying conditions. For example, when a "mother at home with children" (p. 59) finds a

classmate in a similar situation, these two students are likely to have the same challenges. Such bonds can decrease the level of isolation that students might feel at the beginning.

Learner awareness is essential when implementing a web-based course. Pollacia and Simpson (2000) point out that there can be students who do not have the abilities necessary to succeed in a virtual classroom. Their success depends on their maturity, self-discipline, and the ability to pace themselves to fulfill the requirements of their online course. Students who do well in web-based environments are active learners. They need to be resourceful and work independently. In addition, they need to manage their time effectively and take the responsibility for their own work.

Learners' autonomy is an essential implementation issue since the teacher serves as a guide or facilitator most of the time in web-based courses. The key to student success is students' being self-motivated and independent learners. The difficulty for distance education students is that students have to complete the same assignments as in a traditional class. They also need to work in a disciplined way to complete the course requirements regularly although there is no real-time classes that students have to attend (Harrison & Bergen, 2000). However, it should be kept in mind, as Weston and Barker (2001) remind us, that some students do not have the discipline or tendency to work independently.

Students' success in online courses also depends on their knowledge of basic computer skills. Some students may have poor computer skills. According to Koroghlanian and Brinkerhoff's research (2000), students were quite good at reading, sending emails and surfing on the Web. However, they felt less capable when it came to "more technical skills such as installing browsers and plugins or creating Web pages" (p. 136).

When implementing WBI, it may be beneficial to have an orientation program for students before the web-based course begins to prevent some of the problems that they might have during the online course. In order to decrease the anxiety level or fear of the unknown that students might have for WBI, Ross (1998) mentions that orientation days can help anxious distance education learners adapt to their new learning environment. He also suggests having face-to-face orientations if it is possible for the students. Students who cannot have attend the face-to-face orientation days might also be provided with online videoconferences or synchronous chat sessions with the instructor. Vrasidas and McIsaac (1999) point out issues that could be dealt with in an orientation, which could be face-to-face in the early stages of the course:

> The course was a combination of face-to-face instruction and online course. Class met face-to-face during the first three weeks during which students were introduced to the format, requirements, and schedule of the course. In addition, students were guided through the process of downloading and installing FirstClass software and accessing the class information online (p. 4).

Another important issue related to implementation relates to levels of challenge in web-based courses. Starr (1997) believes that "WBI provides the means for higher level instruction, such as problem solving and for increased learner control (p. 9). Peterson (2000) thinks that WBI has the advantage of the pedagogical potential of the Web as it moves away from "structured, linear learning models" (p. 1) in which students are given a problem instead of the tools to solve the problem. While trying to solve the problem, students discover and learn about the tools that are needed to problem solve (Peterson, 2000). In addition, when students attend online discussions, they can reflect on these discussions afterwards and have the chance to revise and think about written statements (Weston & Barker, 2001). This activity may increase their critical thinking skills and enable them to become better learners.

There are other implementation issues, from the perspective of the teachers that have to be taken care of, these issues can be grouped into two categories: teacher preparation and teamwork. Teacher preparation includes training for teachers, teachers' role as a guide, and interaction. Teamwork, on the other hand, consists of time issues, work and technical help.

The first teacher preparation issue relates to the need for pre-service and in-service teacher training on web-based course design and implementation. Since web-based instruction is a new medium, teachers need training on how to plan and design non-face-to-face instruction. Before the academic year starts, it is necessary to receive training on both specific course management and the delivery system, and on techniques for designing an effective online course (Harrison & Bergen, 2000). At the pre-service level, Rilling (2000) mentions the importance of teacher training for student teachers when stating, "it is essential to devote some part of a teacher education program to hands-on training in a CALL environment" (p. 160). It is beneficial to design teacher education courses that provide necessary computer skills for student teachers.

With the emergence of web-based courses, face-to-face instruction has moved towards non-face-to-face instruction; in the process, teachers' roles have also changed accordingly. Teachers have become more student-centered and because of learner autonomy and the flexibility in online education, they become more like a guide or a facilitator. Warschauer and Whittaker (2002) define the teacher in an online environment as "a guide on the side rather than a sage on the stage" (p. 371). Student control is desired in an online environment and the instructor should let students have some control over how to use the material (Weston & Barker, 2001). In that case, the instructor's role is to lead the student by giving clear guidelines.

Students can misunderstand what they are asked to do in an online course and since the teacher is not available at that moment, they might feel frustrations that may lead to demotivation. Therefore, teachers should never disregard the possibility of students' ability to misunderstand and they should be careful while stating their instructions; similarly, information about the course should be given as clearly as possible (Pollacia & Simpson, 2000).

Interaction is the last, but maybe the most important, issue related to teacher preparation. Since some students may feel isolated in web-based courses due to the lack of a real classroom, issues related to interaction should be considered seriously while the online courses are designed and implemented. Vrasidas and McIsaac (1999) claim that creating an environment where students can feel present socially depends on the instructor and the moderator. Students can interact with their instructor and their friends through Computer mediated Communication (CmC) tools that allow for the use of certain techniques such as collaborative group work and group discussions. The effective use of these tools can improve the quality of the online courses since the students can have the opportunity to reach many resources and they also communicate among themselves and with their instructor (Barnard, 1997). Group activities can increase interaction among the learners and collaboration in a virtual classroom. Thus, it is advised that these activities be designed in advance in order to develop the idea of being present socially and the idea of not being isolated in an online learning community (Vrasidas & McIsaac, 1999).

Teamwork is another key point that is crucial when designing and implementing a course. When the implementation stage of web-based courses is considered, the importance of teamwork seems much more important. It is advisable

for designers and implementers to work as a team because the implementation of an online course requires more time than a traditional classroom and the people who are involved in it may not be fully knowledgeable about it. Kang (2001) identifies "time commitment" in the implementation of web-based instruction as "one of the biggest challenges in online teaching (p. 23). Kang (2001) also claims that creating and implementing a web-based course could require two or three times the usual amount of time in comparison to face-to-face instruction. Pollacia and Simpson (2000) also mention that the development and implementation of an online course requires a lot of time and effort, especially at the beginning, when compared with traditional courses. Since the design and implementation of a web-based course involves a wide range of knowledge and resources, it can be difficult for an individual teacher to do it on his or her own. Therefore, teamwork is necessary when developing and implementing an online course (Kang, 2001).

Another key issue in the implementation of a successful online course is technical support. It is impossible to implement a web-based course without some forms of technical support. Because it takes a lot of time to implement an online course, technical support can assist the teacher and the students. Weston and Barker (2001) mention that university instructors are content experts who are rarely trained as instructional designers or computer programmers. Therefore, working with technical experts will help the development of "easy-to-use and visually successful Web-based materials with sound instructional design" (p. 19).

<div align="center">Conclusion</div>

This chapter has reviewed literature related to this study: technology in education, the Internet, Web-based instruction, course design in WBI, and implementation of WBI. The next chapter will focus on the methodology, presenting

the participants of the study, instruments, data collection, and data analysis

procedures used in the study.

CHAPTER 3: METHODOLOGY

Introduction

This study aimed to determine the factors that course designers have taken into account in the design and implementation of web-based courses, how the design and implementation of the web-based courses were effected by these factors, and course designers' views of possible future directions for developing and implementing web-based courses. From the results of this study, some recommendations are made for Bilkent University School of English Language (BUSEL), which is thinking of designing and implementing web-based courses in its EFL setting.

This chapter presents study participants, the instruments that were employed in gathering data, the procedures that were followed during the data gathering process, and the data analysis procedures.

Participants

The participants of this study are nine volunteer participants who have designed or implemented web-based courses in higher education settings. Initially, I tried to get teachers who have designed and implemented web-based courses in Turkey. However, since web-based courses are not widespread in Turkey, participants who work at universities outside Turkey were also accepted in the study as well. The nine participants all work at the university level in four different countries: Turkey (2 teachers), Northern Cyprus (4 teachers), Spain (1 teacher) and the USA (2 teachers). They have been involved in WBI in various ways and for varying lengths at time. Details of their backgrounds are presented in Table 1, with more detailed descriptions following the table. Here, and elsewhere in the text, all participants are identified using pseudonyms.

Table 1. Participants' background information

Name	Gender	Nationality	University	Experience Teaching English	Experience in Current Department
Arzu	F	Turkish	Middle East Technical University	17 years	6 years
Ali	M	Turkish	Abant Izzet Baysal University	10 years	3 years
Simon	M	Canadian	Eastern Mediterranean University (EMU), Northern Cyprus	12 years	4 years
Fusun	F	Turkish Cypriot	EMU	12 years	12 years
Aysen	F	Turkish Cypriot	EMU	5 years	5 years
Sami	F	Turkish	EMU	35 years	3 years
Mirella	F	Spanish	University of Cordoba, Spain	3 years	1 year
Emily	F	American	California State University, Sacramento	28 years	25 years
Ann	F	American	Community College	13 years	5 months

Table 2 below presents the participants' specific experience with WBI. It includes the length of their experience with WBI, the courses they have taught, and whether they have received training in this area.

Table 2. Participants' web-based instruction experience

Name	Experience in WBI	Kind of courses offered on the Web	WBI training at their institution
Arzu	1 year	Reading course	No
Ali	1 year	Academic reading and writing course	No
Simon	3 years	Online English course as a part of a 2 year distance education course, technical report writing, and TOEFL prep course	Yes
Fusun	2 years	Computer course for Ts to improve their technical skills and also integrate WBI into classroom teaching.	No
Aysen	1 year	EFL (English as a Foreign Language) course	No
Sami	Not started yet	ELT Methodology	Not in the institution, but in a one-month session on WBI at University of Southern California, Center for Scholarly Technology
Mirella	3 years	General English for Medicine	No
Emily	2 years	CALL IS Academic Session, "The Human Face of CALL", "Technology in a New Era", "Reading Electronically"	Yes
Ann	3 years	Listening and speaking course	No

My first participant, Arzu, is a Turkish English teacher who has been teaching English since 1986. She has been teaching English through web-based instruction for a year. She has taught an online Academic Reading course at Middle East Technical University, an English-medium university, in the Foreign Language Education Department. She designed and implemented her course as a required course for first-year students in the English Language Teaching Program and is thinking of offering it as an elective course for other departments as well.

Another Turkish participant, Ali, completed his dissertation on Computer Assisted Language Learning at the University of Cincinnati. He has taught several graduate and undergraduate level courses at Nigde University, Abant Izzet Baysal University, and the University of Cincinnati. He is working at Abant Izzet Baysal University as an assistant professor in the Department of Computers and Instructional Technology. He has been teaching English for 10 years and he has been working in his current department for three years. He taught academic reading and writing course through web-based instruction for one year at University of Cincinnati.

I had four volunteers from Eastern Mediterranean University (EMU) and I wanted to work with all of them, as EMU is the university that is the most similar to BUSEL. The teachers who have been working for EMU all have different experiences. Three of them (Simon, Fusun and Aysen) have designed an online English course together with one of them (Aysen) implementing it as an e-teacher. Simon is from Canada. He has been teaching English since 1991 and has been teaching English through web-based instruction for three years. Fusun is from Northern Cyprus and has taught English since 1991 at EMU. She has been interested in teaching English through web-based instruction since 1999, but she was not

involved in formal e-teaching. She was involved in WBI through pilot projects first. She has been teaching WBI formally since September 2002. Aysen is also from Northern Cyprus and she has taught English for 5 years at EMU. She has been teaching English through web-based instruction for only 1 year.

Fusun and Simon submitted the original proposal at EMU for a web-based course in 1999 as an attempt to experiment with 'Flexible Learning'. The idea was to have students who were repeating a level to do this in a lab as part of their contact hours. Since that time, they have had an opportunity to develop a completely on-line English course as part of a two-year distance education course run by EMUONLINE. Fusun, Aysen, and Simon collaborated on the design of this project, and Aysen has been effectively running it as an e-teacher. They are now collaborating on a wide range of web-based projects, including support for face-to-face classes via 'companion' web sites. They also have worked on EAGLE (English for Academic and General Learning Environment), an online resource provided by the university which helps guide all EMU students studying English in effective use of web-based resources.

The fourth EMU teacher, Sami, was different from the other participants in this study because he has not taught web-based courses yet. Based on participant Simon's recommendation I contacted Sami as a possible source for the study. He was positive about helping me with the research when he heard about it as he has been interested in web-based instruction since 1991. Furthermore, he is teaching courses about instructional design in the ELT department at EMU. I thought he could provide insights about design issues for the study. In the end, though, a change in position limited the amount of data he could send me. He only managed to send me information related to his background and design before the end of the study.

Another participant, Mirella, is a teacher at the University of Cordoba in Spain. She has co-designed a web-based course on English for Medicine and four syllabuses for online courses on other English for Specific Purpose (ESP) topics. She has been working as an English teacher since 1999 and has been interested in web-based instruction since then. When Mirella saw the mail that I had sent to EV (Electronic Village) ONLINE Webheads, she emailed me back and wanted to take part in the study. Since she was one of the designers of a web-based course, I thought her experience could be beneficial in terms of understanding the design and implementation of a web-based course.

Emily, who is from the USA, has been teaching English for 28 years, but she had been running web-based courses for only two years of that time. She teaches a free course each year through TESOL CALL Interest Section's (IS) Electronic Village (EV) Online. The first course was a follow-up to the CALL IS Academic Session, "The Human Face of CALL." She also participated in the Webheads in Action course. Last year she ran a similar follow-up to the California TESOL (CATESOL) convention called "Technology in a New Era," concerning new technologies and research in student uses of technology at all age levels. This year she was also a trainer for the EV Online and ran a course leading up to a colloquium on 'Reading Electronically'. She also has started a group with Mike Marzio to discuss the uses of video and voice technology on the Internet, while continuing her involvement with the Webheads 'Community of Practice'. She has taught as a guest lecturer for the past two years with Landmark College. Her subject was assistive technologies for special needs/handicapped students. She is currently moderator for an online course at a German university. Her role there is to assist groups in exploring online learning environments, but she does not provide content for them.

Since she has been teaching in the United States, she thinks that most students are no long novices at web-based instruction as they are familiar with the Internet and CmC tools. However, when Turkey and web-based courses are considered, the students in Turkey might still be novices since they are coming from different social backgrounds and may not have had any experience with the Internet.

My last participant, Ann, is also from the United States. She is working at a community college and has been teaching English for seven years. She has been interested in web-based courses and has been teaching listening and speaking courses through web-based instruction for three years. Since she comes a different society and teaches at a different institution than Turkish participants, I thought it would be interesting to get her ideas on web-based instruction as it is useful to get as many different points of views as possible while trying to find out the design and implementation issues related to web-based courses. Again, however, time constraints limited the amount of input I could receive from her.

<center>Instruments</center>

The data for this study were collected through two instruments, a questionnaire and interview. The questionnaire was sent to eight participants through email and one of the participants was interviewed. The interview consisted of the same questions as the questionnaire.

<u>Questionnaire</u>

I chose to use a questionnaire as a research instrument since it is suitable for my research study. Since the participants live different parts of the world, I thought it would be practical to email them the sections of the questionnaire. In addition to that, I did not have the possibility of conducting an interview with all my participants for the same reason. Thus, it was easier to reach my participants with a questionnaire

through the Internet. Moreover, it was faster to send out the questionnaire via email, instead of sending the questionnaires by post for my study.

I designed the questionnaire (See Appendix B) in light of the literature and research questions guiding the study. The questionnaire includes 29 open-ended questions in four sections: background, design issues, implementation issues, and future directions. In the background section, I mostly focused on my participants' experience with web-based instruction. In the design section, I had questions related to issues that were crucial while designing a web-based course. I also asked some questions related to the processes that they had gone through while designing a web-based course, the problems that they had, and student factors that should be considered. The implementation section also had questions related to the issues I mentioned in the design section, but in this section connected to implementation. In addition to those questions, I had some questions that were related to student issues, as students are a major consideration in implementation. The final section focused on future directions; participants were asked what they had gained through designing and implementing web-based instruction, what they think about the future of WBI, and what suggestions they would make to colleagues who would like to teach through the web.

Interview

I used the interview technique with one participant to collect the same data that I solicited in my questionnaire. Since Arzu lived in Ankara, I had the chance to interview her. I preferred to have an interview with Arzu because interviews allow for immediate feedback and I had the opportunity to ask for clarification when necessary. The interview situation permitted much greater depth than the questionnaire as it gave me the chance to ask further questions when my participant

said something that I wanted to explore more. When compared with my questionnaire, it was much better to have an interview as I collected all the information that I needed at once. My interview was a semi-structured one with pre-determined questions that were same as in my questionnaire. The interview was held in my participant's office at the beginning of April 2003. Arzu preferred not to be recorded, so instead of recording what she said, I took detailed notes during the interview. All quotes attributed to Arzu in the text of this study are taken directly from these notes (See Appendix C for a sample transcript of the interview).

Data Collection Procedures

While I was reading sources to write the literature review chapter, I noted down the questions that I came across in different sources and the questions that came to my mind. When I organized the questions and clustered them under specific topics, I realized that they were all open-ended questions and, as a result, there were too many to be practical for a questionnaire. Since it takes so much time to answer a lengthy questionnaire, I felt the need to cut down the number of the questions. I decided to have 29 open-ended questions by choosing the most common questions that I had come across and the ones that seemed more important.

Once the questionnaire was designed, I contacted people who were interested in designing and implementing web-based courses in EFL environments through EV ONLINE Webheads and through personal contacts. I sent a general email to EV ONLINE Webheads explaining my study and asking for participants. I received only two responses from the group. My other contacts produced seven other participants. With nine participants total, I did not have the chance to choose only the people who have designed web-based courses that will be similar to what BUSEL is thinking about nor could I pilot my questionnaire. The participants of the research study came

from a variety of contexts and they had different levels of experience in teaching web-based courses.

I decided to send the questionnaire to my participants in four separate sections (i.e., background, designing web-based courses, implementing web-based courses, and future directions), since it would have taken a long time to complete a questionnaire that had 29 open-ended questions at once. The sections were scheduled to be sent every two weeks. However, due to problems, such as heavy workloads or simply forgetting to answer the questionnaire, there were some delays in participant responses. I had to send participants reminders to return sections to me. Some of my participants did not return all sections even though I sent them reminders.

After I had collected my data, I analyzed it qualitatively in order to answer my research questions. It should be noted that when participants were completing the questionnaire, some of them had problems with particular questions or sections because the focus was not related to their work. For example, Simon and Fusun did not have much to say about implementation since Aysen implemented the web-based course. Therefore, I asked participants in these situations to complete only the relevant parts of the questionnaire for them.

Table 3 below presents the participants' contribution to the study by completing the sections of the questionnaire. It includes the sections, background, design, implementation, and future directions that were sent to the participants regularly.

Table 3. Participants' responses to questionnaire sections

Participants	Background Section	Design Section	Implementation Section	Future Directions Section
Arzu	X	X	X	X
Ali	X	X	X	X
Simon	X	X	X	X
Fusun	X	X	X	X
Aysen	X	X	X	X
Sami	X	X		
Mirella	X	X	X	X
Emily	X	X	X	X
Ann	X	X		

Note. X: completed

Data Analysis

Only qualitative analysis was used in this study. Common points were sought in the data gathered through the questionnaire and interview. The first step in the procedure was the analysis of the responses to the questionnaires and the interview. After the responses of the questionnaire were collected, the 29 open-ended questions were analyzed qualitatively (See Appendix D for a sample data of the questionnaire). The responses and the transcribed interview were read carefully and responses were organized according to the questions in each section. In this way, it was much easier to find the main themes related to the same question. I worked on each section separately. I first dealt with design issues, continued with the implementation section, and finally looked at the future directions section. Every theme related to the aims of the study and the section I was working on was highlighted with a different

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colored pen. The color-coding made the main themes easy to recognize in the transcripts. I also took some notes in the margins while going through the responses. I found both similarities and differences in the participants' responses for each of the same themes. These similarities and differences were about concepts related to the sections. For instance, while one of my participants believed that it was good for the student to be alone in a web-based course since it promotes learner autonomy, another participant mentioned just the opposite, stating that the student might feel isolated. With the help of color-coding and margin notes for organization, I wrote my data analysis section.

Conclusion

The focus of this chapter was on the methodology of this research study, with an emphasis on the participants, instruments, and data collection and data analysis procedures. The next chapter will provide the detailed data analysis.

CHAPTER 4: DATA ANALYSIS

Introduction

The aim of this study is to determine the factors that course designers have taken into account in the design and implementation of web-based courses, how the design and implementation of the web-based courses were effected by these factors, and course designers' views of possible future directions for developing and implementing web-based courses. Nine ELT professionals, from different institutions inside and outside of Turkey, participated in this study. Eight participants completed a questionnaire, which consisted of four parts and 29 open-ended questions. One participant was interviewed as she lives in Ankara, Turkey.

Data Analysis

In this study, only qualitative data analysis procedures were used by the researcher. The questionnaire and interview data, which were divided into 4 parts, were compiled by the researcher and analyzed qualitatively.

The data analysis was based on the interpretation of questionnaire and interview data, in particular the interpretations of patterns emerging from participants' responses. Participants' answers were grouped under the questions posed in the questionnaire and interview, and the items and responses related to the questions were highlighted. While analyzing the highlighted responses, the researcher identified themes on design issues, implementation issues, and issues related to future directions which emerged from participants' responses. In this chapter, the data results are presented and discussed in three sections: design, implementation, and future directions. The main themes which emerged are presented in separate subsections.

Design Issues

The answers to the questions on design issues produced a variety of responses, reflecting the different backgrounds and experiences of the participants. Out of their responses, four major concerns that shaped their experiences designing WBI courses emerged. These were student concerns, technical concerns, content concerns, and pedagogical concerns. Since these concerns were intertwining, some quotes presented as supporting evidence are used in more than one section.

Student Concerns

The participants mentioned many different student concerns that emerged when designing their web-based courses. The main themes which emerged were about student motivation, student autonomy, and learners' needs to develop linguistic and computer skills to support academic success. Course designers take these issues into consideration while designing both traditional courses and web-based courses because these themes affect learners' success and learning processes.

Motivation is a concern of participants in most studies about learning. Murray (1999) states that educators can use WBI creatively to provide learners with opportunities that are "beyond the present scope of the classroom" (p. 22) and this can affect students' motivation both positively and negatively. The participants of my study emphasized positive aspects of motivation, including the importance of new ways of motivating students, getting students' attention on current topics, paying attention to each student, and providing material on the Web for students who have missed some information in the classroom while designing web-based instruction.

> (Simon) Basically teachers are always on the look out for new ways to motivate students. There is a danger of using technology for technology's sake, but, in the case of the Internet; there are resources and facilities that just are not available to teachers/students in a traditional paper-based face-to-face environment…desire to 'interact' with the web page…motivation in having multi-media elements.

(Ann) Using the web allows me to capture students attention with information from current debates, topics that are on their minds and in the news…I like to customize my courses so that it meets the needs and interests of the individuals, while meeting the course goals required by the university.

(Arzu) During those 3 hours [in a traditional class], some students might have paid less attention; however, each student involves in the lesson on the Web and they interact with me individually.

(Emily) I also used my own home-made Webpages with PowerPoint presentations, summaries of chat discussions, etc., to keep the interest.

(Mirella) We have to upload to the Internet exercise in order our student can recover the face-to-face lessons they have missed, but apart from that I have my own website.

The results of the design issue questions revealed that while designing web-based instruction, promoting student autonomy is one of the issues that has to be taken into consideration. Dickinson (1993) mentions that learner autonomy refers to "the degree of the learner's taking responsibility for his/her own learning"(p. 330). Most of my participants stated the importance of learner autonomy by emphasizing the need to allow students to take over the class and lead their own learning, as well as work at their own pace.

(Emily) I really enjoy the building of a community and letting students take over the classroom. Online teaching does this even more so. I feel the teacher should provide resources and point to ways of learning, and then step aside so that the students can take charge of their own progress.

(Fusun) [the participant is talking about the web-based course]Student-centered and every student works on his/her own pace.

Some of my participants stated that while they were designing their web-based courses, they paid special attention to meeting the learners' needs in their courses. Meeting the students' needs in WBI is as important as it is in a traditional classroom because meeting students' needs is directly related to students' motivation and their expectations.

(Ann) I like to customize my courses so that [they meet] the needs and interests of the individuals, while meeting the course goals required by the university….Course goals, students' personal goals/individual problems.

(Sami) It takes some time to get rid of the idea of book-based materials design. In time, one learns to be more flexible in designing the pages by considering the expectations of the learners

(Aysen) Some of the student factors, taken into consideration while designing our WB course, were for example, their departments, age, gender, their needs, and their technical knowledge.

The last student concern, which was mentioned by one participant, was about developing linguistic and computer skills to support students' academic success. While designing a course, it is essential that designers incorporate some skills in language learning to help students, as students will use these skills in their academic environment. Arzu mentioned that learners needed to have some basic knowledge about reading, writing and grammar. One reason why the other participants did not mention developing linguistic skills explicitly could be that they might have thought they had covered this issue under needs as a general topic. Another participant, Ann, stated an interesting point about the relationship between computer literacy and success in academic environments.

(Arzu) My major aim was to change the mental map of students, to provide elements for them to become higher readers and reading was a tool. I wanted my students to understand a global issue at the first stage.…I tried to help them to have higher thinking skills.…Students must have some background of English. They have to know reading, mastery of grammar, write something and computer skills.

(Ann) So by increasing their computer literacy, I am also improving their chances for success in an American university.

Technical Concerns

While answering the questions in the section exploring web-based course design issues, all of my participants mentioned issues related to technical mastery, the importance of teamwork, time, accessibility for teachers and students, and the

choice of tools. Technical concerns are the ones which designers have to pay much more attention to because language teachers, most of the time, do not have detailed knowledge about technical issues. Learning new technology can be time consuming for language teachers who have to take care of many other issues during the learning/teaching process; therefore, working as a team and sharing the workload might solve the time problem. Furthermore, teachers and students must have access to computers and the Internet to have a suitable environment for web-based instruction. The choice of CmC tools is another factor that affects the learning process in WBI.

All my participants commented on the need for technical mastery for course design in their responses. Some believed it was necessary to learn how to use the technology; however, some stated that it would be much better to get some technical help from someone who was good at technical issues because it was time consuming to learn how to do this themselves. Simon gave a very detailed response, indicating choices to be made regarding specific programs.

> (Simon) Yes—as can be expected, many new skills were basically technical in nature: using a web page editor (we defaulted to Front Page), learning basics [of] HTML, experimenting with various Javascripts and applets, using CGI scripts for things like polls, submitting forms, etc. (since our server didn't support ASP or FP server extensions), multi-media programs like RealProducer, CoolEdit Pro, graphics/image software like PhotoShop (I'm still quite hopeless with this!!), learning how to set up a discussion board (we used Lyris - freeware), learning how to chat (including mIRC and ICQ), learning basic FLASH (actually we opted for SWISH which was much easier to learn), learning how to incorporate animated GIFs, learning how to decide on appropriate media formats (JPEG, MP3, MPEG, etc.). This is just off the top of my head...other things include mastering peripherals like scanning, digital camera and data projectors. For this 'technical side', much was done on a self-development basis. Technically, we would see things in other web pages that we liked and we basically developed techniques to 'borrow' things like Javascripts, web page design, etc.

(Ali) Web programming skills, skills in using the Internet technologies (web, email, message boards) are some to name. In addition, I needed to develop an understanding of how hypertext is designed and presented to the end users.

(Fusun) Yes, lots of computer skills. They were mainly related to web page design. How to use FrontPage, how to add forms to a web page, how to use hotpot program, how to add chat rooms and discussion boards to put web site.

(Fusun) You need advanced computer skills.

(Sami) Yes. As teachers and book writers, we all have classroom-oriented skills in teaching. For a web-based course, we need to develop some technical skills and learn how to shape our course when we are not present in introducing the materials on the web. We need to imagine the processes that a learner on the web follows and design the pages and other elements of the web course accordingly.

(Emily) Not really. I used the Yahoo Groups interface, which is an extremely well-designed course management system--and is free. I was already in the process of teaching myself some HTML, but it was not really necessary. I had used chat before to discuss work issues. I did learn a number of things about the pedagogy of online teaching, so in that sense there were some new teaching skills to learn.

Some of the participants believed that having technical support would be much better than relying on oneself as they stated that their concern was English and they found having technical support easier.

(Arzu) No, because I had an assistant who has great computer skills training. He helped me when designing the web-based course. He is good at technical issues. Therefore, I didn't need to develop any new skills to design a web-based course.

(Mirella) We are not computer teachers, but English teachers. Sometimes I have felt frustration.

(Mirella) How did you solve the problems? Thanks to forums or the help of our technician.

Many participants also stated how beneficial it was to work as a team when designing a web-based course. Since web-based instruction is a new medium, there are many new things to be learnt. It takes a lot time to learn the details of technical design issues, as previously indicated. Moreover, teachers are already involved in

many other issues about learning and teaching. Therefore, it is crucial to have a team

where the labor is divided up while designing web-based instruction. Some of the

participants did not mention that they worked as a team; however, they used the

pronoun 'we' implying that they are not alone while designing web-based courses.

The participants found it helpful to work as a team because course design was easier

this way. Each member of the team could learn and work on different issues. This

saved them time and allowed them to work faster. They were also able to support

each other by giving feedback to each other.

> (Simon) There were three of us working on the online English course
> (basically covering the Elementary level). Technically, we would see
> things in other web pages that we liked and we basically developed
> techniques to 'borrow' things like Javascripts, web page design, etc.
> Often we'd 'challenge' each other to figure out how something we saw
> was done, and then share our solutions. This is an ongoing process.
> for example, at the moment we're trying to find out how to automate
> breadcrumbs' in web site management and navigation. This is a never-
> ending story.

> (Emily) I'm Groups interface, point-and-click is pretty much all that is
> needed in the way of technical/computer skills. The EV Online crew
> set up a little training program that walked us through the process of
> creating an online course through YG. We focused first on the
> technological end…and then the pedagogical side…Having a group of
> moderators to help each other is a great solution to any technological
> or pedagogical problems—we ca experiment and support each others'
> investigations.

> (Mirella) Since my partner and I did not have any idea when the
> platform was bought, we had to learn with pure practice….How did
> you solve the problems? Thanks to forums and the help of our
> technician.

> (Arzu) With the help of my assistant. He didn't use FrontPage and I
> didn't have time to learn all that stuff and I found someone who was in
> the business….I had that assistant who had high capability. He was so
> creative so we got along well…He designed the web-based courses
> according to the regulations set by the informatics institute….the
> institute provided the technology and we designed our courses with
> their support.

The responses that I received from the participants indicate that the designing

of a web-based course took more time than was expected when compared to the

design of traditional classes where there was face-to-face instruction. This time

factor could be because WBI is a new kind of instruction involving new technology.

Most of the participants mentioned that, in general, it took about six months to

design a web-based course. However, depending on factors such as the availability of

technical help, this time might be shorter or longer. In addition to the time that was

needed for designing web-based course, some participants stated that designing a

web-based course was an ongoing process in which they continuously made

necessary changes just as in traditional face-to-face instruction.

> (Simon) A lot more than originally anticipated!!!…We were asked to
> come up with a web-based course very quickly and with limited
> resources.…I guess the total number of person-hours would be
> somewhere in the region of 400 to 500 hours, from start to
> finish…Well, in excess of 1,000 hours…possibly even as high as
> 2,000 hours (for a course that originally was developed to run as a
> two-hour a week course for 32 weeks—i.e. 64 contact hours.

> (Sami) It took me about six months to learn some software like Front
> Page, Dream Weaver, Flash, PhotoShop, etc. and search for the related
> materials (web pages) on the Internet after I prepared my own texts
> which took me about a year because I wrote my own original course
> materials. If one tries to collect existing materials and prepares a
> course pack, it may take less time but there is the problem of copyright
> to be solved before publishing on the web.

> (Ann) That varies… it is definitely more time consuming than simply
> preparing for face-to face instruction; the time difference is about 40%
> more than with regular teaching. Most of the time is spent
> researching, that is, locating new material and converting it into
> something that can be used for the course. Designing pre-task and
> post-task activities is also time consuming, especially when they
> require the extra step of typing information and uploading html pages
> or pdf pages to a web site. However, once the materials are collected
> and created, assuming one has the opportunity to teach the same
> course a second time (sadly, a rare occurrence), the materials are ready
> and require no time at all.

> (Arzu) Actually it took 1 year, but for the past 5 years, I have been
> working on it, since 1998. I am still improving different sections.

During those years, we had many technical issues to be done and proofreading also took some time. Sometimes I added new vocabulary. It seemed easy but it took quite a long time to do things like arranging the visuals, characters. Even [the] smallest issues such as characters or visuals took quite a long time.

(Mirella) Syllabuses, it depends, from 2 days to 2 weeks. The whole course (months).

(Fusun) About 6 months.

Some participants also mentioned the importance of accessibility of tools for both students and teachers. While designing web-based courses, the most commonly stated concern was accessibility to computers and the Internet both for the students and teachers. It would be meaningless to have a web-based course where there were only a few computers for students or where students did not have Internet access. One of the participants also mentioned that they did not have suitable tools to ease their work.

(Ali) The biggest problem for me was the accessibility to computers. I had to make sure every student had a reliable access to the Internet and at some level of computer expertise. If those were not provided, the process becomes a hassle for them. In addition, finding a reliable server is important. I had solved this problem simply by consulting with the IT unit at the host university.

(Arzu) I had a lab with PCs that have a speaker system and the lab was hi-tech. Some students reached the stuff from home. The students had some downloading problems due to different software systems but it wasn't a big problem.

(Mirella) [while she was answering the question about students' reaction to non-face-to-face interaction] Some of them [students who were having web-based instruction] complained because they have no access to Internet at home….

(Fusun) We didn't have all the necessary tools. We weren't using any ready made software package like WebCT or Blackboard so it took us some time to combine everything together i.e. chat rooms, discussion board.

The participants stated that they chose different tools while designing web-based courses. Some of them got some help from some software programs such as

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Hot Potatoes and Quandary. Most of them mentioned using CGI and Javascipt to

create web pages. The choices were mostly made according to local computer

facilities.

> (Simon) Using a web page editor (we defaulted to FrontPage), learning
> basic HTML, experimenting with various Javascripts and applets,
> using CGI scripts for things like polls, submit forms, etc. (since our
> server didn't support ASP or FP server extensions), multi-media
> programs like RealProducer, CoolEdit Pro, graphics/image software
> like PhotoShop (I'm still quite hopeless with this!!), learning how to
> set up a discussion board (we used Lyris - freeware), learning how to
> chat (including mIRC and ICQ), learning basic FLASH (actually we
> opted for SWISH which was much easier to learn), learning how to
> incorporate animated GIFs, learning how to decide on appropriate
> media formats (JPEG, MP3, MPEG, etc.).

> (Mirella) Respondus, Hotpotaoes….

> (Fusun) How to use FrontPage, how to add forms to a web page, how
> to use hotpot program, how to add chat rooms and discussion board to
> put web sites.

> (Fusun) We used FrontPage for web pages and HotPot program to
> have interactive exercises and forms.

> (Sami) It took me about six months to learn some software like Front
> Page, Dream Weaver, Flash, Photo Shop.

One of the participants mentioned how to decide on the appropriate media

format for multimedia elements at the courses. There were also some other

participants who stated having to use trial and error to resolve technical issues while

designing their web-based courses.

> (Simon) …learning how to decide on appropriate media formats
> (JPEG, MP3, MPEG, etc.)

> (Simon) …experimenting with various Javascripts and applets

> (Ann) Trial and error, which also requires a lot of time and can be very
> frustrating for the teacher. For example, I had a lot of difficulty with
> Blackboard's online tests, and had to recreate the same test 3 times
> before I got what I wanted. I experienced a lot of frustration and
> thought to cancel the test at one point, because I was so annoyed.
> However, I did give the test, only to discover other flaws in this
> feature (more learning on my part), and found I had to hand grade each

test to be certain students were judged fairly. This was my error; had I been more familiar with the program, I could have avoided this problem.

Content Concerns

All of the participants mentioned that they prepared their materials in response to the nature of their courses and their students. When their responses were analyzed, there were two issues that surfaced: the content of support courses where teachers design web-based instruction around face-to-face instruction and the content of complete non-face-to-face courses. Some participants prepared their web-based course material to support face-to-face-instruction. Their rationale is to provide their learners with extra materials when their learners need to have more practice. Some wanted to give the learners a chance to keep up with the traditional class when they missed class sessions.

> (Mirella) I use my personal web page [as] a complement of extra material for my face-to-face students.

> (Mirella) We have to upload to the Internet exercises [so] our student can recover the face-to-face lessons they have missed, but apart from that, I have my own website.

> (Aysen) Well, our first aim was to use the online environment to supplement the role of the face-to-face teacher so the first stage was to go the course book page by page, unit by unit, and break it down into teaching chunks...for example: when is there the need to include a chat session or which exercise needs to be supplemented by a discussion board. The other ways in which the role of the f2f teacher has been supplemented is by creating a Syllabus page where each Unit has been divided into steps in which the PRESENTATION and INSTRUCTIONS, which are usually directed by the teacher, are done on-line. Thus, the online environment is used for presenting a new topic and directing the students when to use their students' book or workbook and giving any other input as and when required.

> (Fusun) First, we adapted the face-to-face course syllabus and then the face-to-face course materials into online environment. Then, we designed the web page and the exercises.

Some participants prepared a complete non-face-to-face course on the web and they had prepared their own materials. They did not use their materials to supplement a course book.

> (Arzu) I collected material in the past years, maybe since 1990, not with the aim of WBI, but teaching English. Then, I went through a creative process. I found suitable music and pictures. A sample lesson took 3-6 hours and it had a short story, different pictures and music. My major aim was to change the mental map of students, to provide elements for them to become higher readers and reading was a tool. I wanted my students to understand a global issue at the first stage. I have collected different types of material for 7-8 years. I decided to use which poem with which music and then started writing questions such as inference questions, personal questions. I tried to help them to have higher thinking skills. Students came up with their own creative essays then I put them on the web. Sometimes we needed to elaborate find people who can draw pictures for them.

> (Sami) I searched for related materials (web pages) on the Internet after I prepared my own texts which took me about a year because I wrote my own original course materials. If one tries to collect existing materials and prepares a course pack, it may take less time but there is the problem of copyright to be solved before publishing on the web.

Pedagogical Concerns

Most participants mentioned that there is a difference between face-to-face instruction and non-face-to-face instruction from the pedagogical point of view. Some of the participants believe that the pedagogy of non-face-to-face instruction is challenging and instructors need to develop new teaching skills to design web-based materials. Another participant stated that the designers need to put themselves in the learner's shoes to be able to design a web-based course effectively.

> (Simon) It's relatively easy to pick up the technical skills, but quite a different story when you try to use these skills to design pedagogically sound web-based materials that really offer something 'extra' that normal face-to-face teaching can't. It's often easy to get lost in technical details.

> (Emily) I did learn a number of things about the pedagogy of online teaching, so in that sense there were some new teaching skills to learn.

(Sami) For a web-based course, we need to develop some technical skills and learn how to shape our course when we are not present in introducing the materials on the web. We need to imagine the processes that a learner on the web follows and design the pages and other elements of the web course accordingly. We need to put ourselves in the learner's shoes and simulate taking an online course to be able to specify some processes to go through so that we are able to design a smoothly running course.

One of the participants also believed that there is a similarity between online teaching and traditional classrooms from the point of view of students' taking responsibility of their own progress. Therefore, while designing web-based courses, creating opportunities for interaction among learners is an essential pedagogical factor that has to be considered carefully. However, some participants mentioned that it was difficult to create such opportunities in WBI, or, at least not as easy as it had been in face-to-face interaction. One of the factors that affected this issue was that the learners were not so familiar with communication tools in WBI. In addition to that, the learners did not want to be embarrassed in front of their friends just because they were not familiar with the technology of the instruction. Participants felt it would be advisable to have a training session for students before implementing a web-based course.

(Emily) I feel the teacher should provide resources and point to ways of learning, and then step aside so that the students can take charge of their own progress. So even in land-based classrooms I was less the "sage-on-the-stage" and more of a mentor and guide. WBI really reinforces the way I have always preferred to conduct my classes: small group work, peer-to-peer communication, learning from one another based on solid resources added to and shared by all.

(Ann) Some students were reluctant to learn the technology required to complete projects. This was particularly evidenced in older students (28 yrs +) and those coming from non-technical backgrounds, or countries that were not technologically advanced. A lot of it has to do with trust. If the student trusts you (the teacher) and is secure in the belief that you will not let him/her be embarrassed in front of his/her younger peers – then things go smoothly.

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(Simon) The second biggest problem was to develop interactivity and trying to foster an environment in which the learners didn't feel isolated or alone. Often, activities that involve pair-work or group-work can be set up in class with relatively little problem (although f2f teachers may argue the point), but designing for this kind of collaboration can be quite a challenge in an online environment. Effective use of various aspects of CmC is essential, but you also have to design so that the course can run without too much overheads in terms of teacher involvement (to avoid situations like answering 100 e-mails in a week, spending 6 hours managing a chat session that would normally take 10 minutes in class, etc.) Peer collaboration is a key element, but it is often difficult to get students to collaborate effectively as most don't have this skill even in a f2f environment.

(Sami) The learners have to be trained about the course conduction by tutorial sessions before they start the course.

Some of the participants mentioned that WBI provided learners a positive relationship between motivation and materials when compared with face-to-face instruction. WBI enabled learners to reach materials that were new and interesting, unlike the textbooks in traditional classes, which could be outdated. Materials' being easily accessible affected the learners' motivation positively as well.

(Sami) In my classroom teaching, I try to motivate learners by raising their curiosity level that there is more information on the topic discussed in other sources (I provide references), assign them group projects and the learners try to reach these sources and complete their projects. On WBI, it is possible to put all references together on a web site which is easily accessible [to] learners at any time.

(Ann) I like new, fresh information; textbooks are often outdated or the material is "old news" to me and my students. Using the web allows me to capture students' attention with information from current debates/topics that are on their minds and in the news.

Another important issue that came up in participants' responses was that since WBI was a new concept, it would be better to have a proper orientation to the course and design the course so that there was a consistency between activities and the lesson 'flow'. This was an important point where technological and pedagogical concerns worked together. While designing a web-based course, the designer needed to use some 'tricks' to achieve this interaction, as one of my participants mentioned.

(Simon) Giving instructions....students tend to point and click without reading. Still working on this. However, it is essential to have a proper orientation to the course (best face-to-face), and design the course so that there is a consistency between activities and lesson 'flow'. Other tricks we developed (not always with consistency!!): sticking to standard graphics to symbolize a skill (listening, reading, etc.), following a similar pattern in each unit (without becoming monotonous or borrowing), 'chunking' pages to avoid scrolling and using short sentences and bullets, using 'styles' in FP [Front Page] and 'headings' to provide an implicit 'structure' to the page (still working on effective use of CSS in this regard), introducing a 'stop and check' page where students could not proceed past without scoring basic proficiency. Using CMT and LMS tools, it is possible to see if some students are not logging in or accessing pages, so in these cases the teacher can e-mail the student in question to see what the problem is. Other options include online quizzes at key points in the lesson, and the CMT reporting on individual student progress can be used to see who hasn't been done them.

Implementation Issues

The implementation questions produced a variety of responses that were similar in many ways to the design issues. Out of all responses, two major concerns that shaped participants' implementation processes emerged. These were student concerns and pedagogical concerns. Since these concerns were intertwined with design issues, some of the quotes used in the design issues section and used here as well. The number of responses in the implementation section was smaller than in the previous design issues section. This difference can be attributed to the fact that some of the participants (Simon and Sami) have not implemented web-based courses so they did not have much to say about implementation issues; one of the participants (Ann) could not respond to the implementation and future direction sections, as she was too busy at her institution.

<u>Student Concerns</u>

As with design issues, student concerns emerged as a key concept in the implementation section. The main themes related to student concerns in implementation section were similar to the ones in design issues. These themes were

computer literacy, access to the computers and the Internet, basic study skills, learner

awareness, learners' attitude towards web-based instruction and student interaction.

These issues were identified as important components of face-to-face instruction as

well as non-face-to-face instruction.

Most of the participants mentioned that learners' computer literacy should be

considered before implementing a web-based course. The tools that students have to

use while having web-based instruction is another important issue that has to be taken

into consideration while designing and implementing web-based instruction. Learners

need to know how to use a computer and they should be familiar with CmC tools

such as chat logs, emailing, and discussion boards as they will be using these tools to

interact with their peers and teacher.. Learners who know how to use computers and

CMC tools feel more confident than the ones who have no ideas about them. Many

participants stated that it would be better to have an orientation about how to deal

with computers and programs during web-based instruction.

> (Fusun) One should consider the computer literacy level of the
> students and whether they have the skills to be an independent learner
> and whether they have enough study skills to cope [with] online
> studies.

> (Aysen) Learner training-- one must make sure that the students have
> the necessary computer skills for a start.

> (Simon) Learner training is key -- this involves making sure they have
> the necessary computer skills for a start.

> (Ali) The students should be provided a short prep course or a well-
> documented handbook showing how-tos.

Another main theme that emerged from many of the participants' responses

was related to the basic study skills that students should have before starting a web-

based course. This theme also emerged while design issue responses were analyzed.

Students needed to have enough study skills to be able to keep up with their web-

based studies. This theme was also related to learner autonomy, discipline, and student-centeredness. When compared with face-to-face instruction, web-based instruction lends itself to student-centeredness as the teacher has the role of a guide rather than a traditional teacher. Students need to be self-disciplined since, most of the time, they control the amount of time they spend studying in a web-based course. Learners' awareness plays a crucial role too. When students know what they want and why they study, they become more successful in learning as they are more determined and aware of their needs. They should be willing to learn in web-based instruction as well since these issues are all related to one another.

> (Fusun) One should consider …whether they [students] have the skills to be independent learner and whether they have enough skills to cope online studies.

> (Aysen) Learner training-- one must make sure that the students have the necessary computer skills for a start, but also trying to make them aware of what it means to be an on-line learner, and the extra responsibility that this means in terms of their own 'learning management'. Although we still need to develop some basic 'study skills' training and 'language learning strategy' awareness and training.

> (Simon) Make them aware of what it means to be an on-line learner, and the extra responsibility that this means in terms of their own 'learning management'.

> (Ali) Students' attitudes and willingness is definitely an important issue.

> (Ali) I think they [students] had the belief of web as a game to play rather than a place to learn. This has something to do with students' perceptions, I believe.

> (Arzu) I encouraged them to lead their autonomy. They integrated that info more and the teacher was an orchestra leader just leading and monitoring. They are more autonomous and they gained more info when they sat in front of their computers. I encouraged them to go and visit different sights. I provide them with direct strategy training. This year students reported that once they had learnt how to go to the Net, they found that the more they read the more they learn. As the teacher, I only guided them about the topic which was totally alien. They had to read because they had no background info before and then they came to a stage to talk about freely. Web system open up the stage as

in class the lesson is limited to 3 hours only. They came to a different awareness which widened their horizons.

(Simon) There is a natural shift of focus towards the learner and away from a teacher-centred tendency. This environment, for language learning courses where the emphasis is on interactivity, automatically creates a much more student-centred approach.

Another issue that many participants mentioned was about students' reactions to web-based instruction. Generally most of the participants reported that learners' have a positive attitude towards web-based instruction. However, two of the participants stated that some students had problems with WBI. Some of these students considered this new instruction as a game and this was again related to students' perceptions and attitudes towards WBI which some students did not like because of the need to use CmC tools.

> (Aysen) I believe that the students have a positive reaction to non f2f interaction because I am online most of the day so they don't have any difficulty in contacting me or answer me emails promptly and I post announcement very often to keep them up-2-date with the due dates of assignments, up-coming quizzes and so on....so yes they are very positive about this in respect to our course. From what I've observed, WBI has a positive effect on students because they are free to study when they wish, they don't have to sit and listen to the teacher at certain hours of everyday...its flexible...it's up to them to decide when they'll study, when they'll submit there assignment or quiz (not total freedom but they usually have minimum of 5 days to do the quiz)

> (Fusun) In the course for teachers, some of the students' reaction is positive. We're in the same environment some of them prefer to pop in or call and ask their questions. They work on their own at their own speed.

> (Arzu) The students are quite positive about non-face-to-face interaction.

> (Ali) I had a few students who resisted to use WBI. For those, I provided an option to turn their assignments on paper.

> (Mirella) Some people do not like this way of instruction very much though others love it. Complete ignorance about different possibilities of CMC tools .

(Ali) They were very motivated at first. A lot to do with attitudes. However, when they get to the tasks on a timeline, they showed resistance. I think they had the belief of web as a game to play rather than a place to learn. This has something to the with students' perceptions I believe.

(Emily) I wanted to have a personal connection to students and so tried to use chat on a regular basis. However, I found only a handful of students were willing or able to use it, and even then, most of those did not understand why it might be a valuable activity. This might be because some of them used chat only socially, but also it might relate to time and technology issues; even though chat is quite do-able in dialup mode, a full hour of connection time might be very expensive for some.

Another implementation issue that some participants mentioned was access to the computers and the Internet. It is impossible to have web-based instruction without a computer at learners' homes or a computer center where learners can use computers whenever they need to. Access to computers and the Internet was also mentioned as an important concern while designing web-based instruction.

(Ali) First of all, technological investment both on students' and teachers' side should be ensured. Everybody should be able to access the materials and course web page anytime and everywhere.

(Mirella) Sometime they [students] laugh at some proposes that I give them, sometimes they feel happy abut the idea, some of them complaint because they have no access to Internet at home.

The last issue that should be stated as a student concern was interaction. Interaction is an essential issue and it is connected to CmC tools and pedagogical concerns. Some participants mentioned that interaction in a non-face-to-face environment was similar to interaction in face-to-face interactions. However, some believed that there was a different type of communication due to CmC tools.

(Feryal) We use different mediums/tools (discussion board, chat) but it is still more or less the same: It can be between the teacher and the individual students, teacher to the whole group, student to student, students to students and computer and student. The only difference is when we use discussion board it is delayed.

(Aysen) The interaction patterns can be the same, but in some cases WBI has more advantages because of the opportunity of being anonymous in synchronous mode (i.e. chat) and things like saving a chat log for language work later. Students who dominate in f2f situations may find themselves on more equal terms in a chat room. Asynchronous CmC also provides the 'time lag' feature, so learners have more time to control and reflect on how they will respond. There are also elements of 'virtual groups' that do not exist in a f2f situation. The area of 'network collaboration' is something that we are touching on at the moment as we are attempting this in using WebQuests.

(Ali) A different type of Computer mediated communication. Sometimes, it is hard to keep students on task and understand between the lines.

(Emily) There is far more one-on-one interaction possible than in teaching a land-based course where you may have only a few office hours per week. Anywhere, anytime contact by e-mail and chats are very empowering for students.

Pedagogical Concerns

Pedagogical concerns is another concept that emerged in implementation issues. It includes several issues such as teamwork, stages or processes that need to be gone through while implementing WBI, feedback, assessment, time and the problems that teachers had. Some of these issues are mentioned in the design section and they were also taken into consideration implementation of courses in traditional classrooms.

As most participants mentioned in the design section, teamwork was important while implementing WBI. They stated that they needed support from technical staff during the implementation stages of their web-based courses.

(Mirella) If you are referring to technical help, yes from my forums, sometimes.

(Arzu) My assistant was with me in case something came up.

(Simon) Technically, we don't have to worry too much as the DEI runs the serve and the CMT for us. However, there are many times when a 'technical hitch' needs to be reported and fixed, and this means that the

teacher and the technical support team need to have a good working relationship and can easily make each other understood.

When it came to the stages and processes that they had gone through while implementing web-based courses, most of them mentioned following different stages except the ones who work in the same institutions. However, they all mentioned the suitability of the materials for WBI and CmC tools.

> (Aysen) Stage 1= evaluating the course book (Headway Elementary) - to see if it could be supplemented with online resources and also can it be followed without too much guidance.
> Stage 2= divided course book into steps.
> Stage 3= decided where to include CmC
> Stage 4= decided where to include extra material for the presentation of new topics and for reinforcement.

> (Fusun) The first thing was the evaluation of the course book (Headway Elementary) that was used in class to check if it could be supplemented with online resources and also can it be followed without too much guidance. Next step was dividing [the] course book into parts and deciding how to adapt it to be used in an online course and the final thing was to decide where to include extra material for the presentation of new topics and for reinforcement.

> (Mirella) To make sure everything has been perfectly explained. The process: First to have a syllabus, then to find material to explain it and try to fix exercises to the necessities of a WBC. Finally, try to take care of the physical appearence: comfortable colours, good but easy illustrations, audio...

> (Emily) How best to present materials through the Web medium…
> How can materials best be organized in an online course interface (each is a little different)?

Some participants did not mention anything about teacher to student feedback since they did not experience it in their web-based courses. Some of the participants thought that there were more choices for feedback in a non-face-to-face environment. They also believed that through feedback, they could increase their learners' critical thinking skills.

> (Fusun) There are more options in an online environment for feedback. One might increase the level of cognition/cognitive thinking while giving feedback in an online environment. i.e. when you use HotPot

program you can include different kinds of questions for students to think about while they're trying to find the correct answers. In class, we don't have that much time to ask that many questions for each exercise.

(Arzu) The students couldn't get individual feedback in class that's why some stay the same and teacher is the authority. However, teacher imposes what s/he knows on the Web and students have to construct their info. Teacher initiates a discussion and finds the best parts. Students use their inner criteria and they can distinguish what's valuable and not. Each time they go to a different phase and they find more valuable, invaluable info and what serves my purpose is that inner criteria and higher expectations.

However, some participants' ideas seemed different. One of the participants said that she liked web-based instruction because she could give immediate feedback when compared with traditional classes. On the contrary, another participant disagreed since he stated that it was difficult to give students feedback as soon as they sent their responses in online teaching. The difference here was due to the type of the feedback that they were giving. One of them was talking about giving feedback to written work and the other one was talking about giving feedback to an answer to a question.

(Ali) Depends on the nature of interaction. Students transfer their habits to the WB environment. They expect to receive feedback as soon as they send their question. This is not the case in web environments. That should also be explained to them.

(Arzu) The students couldn't get individual feedback in class that's why some stay the same and teacher is the authority. However, teacher imposes what s/he knows on the Web and students have to construct their info.

(Emily) Again, I would say online teaching is/can be superior in this regard, as the teacher can discuss things with the student as the work is in progress, and also work directly with many small groups simultaneously.

Assessment seemed to be a problematic implementation issue in WBI. One of the participants questioned how reliable it would be to have assessment for web-based courses. Some did not mention anything problematic about assessment. Some

participants did not have formal assessment in their online environments. There was

only one common theme for assessment; two of the participants stated that

assessment should be based on the progress that the learners had made.

> (Arzu) I assessed their weekly tasks. Their grammar process and progress of their mastery and how they started and where they came. As long as I see improvement, the students get higher marks. The success is over 75% on the Web when compared with traditional tests. I monitor what happens at the end. I should see improvement in language, comprehension and master skills. I believe process and product and process helps the product and I want the product to be full quality.

> (Emily) Similar to teaching online, except that formative assessment can be much more detailed and more closely followed. The danger of a student finding a "substitute" to submit work is present, but no more so really than in a land-based course, since the teacher can see/read the student's work throughout the course.

> (Ali) A lot of reliability issues are still going on. Teachers should avoid asking knowledge or information based questions. The questions should involve problem solving, decision making, supporting etc. On the other hand, the design of the web environment is an important indicator of how assessment can be made.

> (Aysen) Our quizzes are designed and set to be available at certain times and days is wonderful. Automatic grading of multiple choice type of answers is also attractive, although there are options for open-ended questions as well. However, YOK [the State Higher Education Council] requires that at least 80% of the overall assessment is done in a face-to-face final exam, so this naturally dictates the number and nature of formative evaluation during the running of the course. Assessment will also include their participation in the discussion board topics, chat sessions and assignments.

A few participants mentioned time as another important issue in implementing

web-based courses. Implementing web-based courses took quite a lot of time, as did

designing them. One of the key issues in time demand is related to teacher's

knowledge of CmC skills, as it may take some time for the teacher to learn how to use

CmC tools. Therefore, it would be advisable for teachers to have good CmC skills.

> (Simon and Aysen) Teacher 'time management'---one can automate a certain amount of the course, but you do have to be prepared to answer a lot of e-mail messages, spend time in chat rooms, monitor student

progress in the LMS, update web pages, fix mistakes, visit the discussion boards and act as a moderator at times, etc. Also, the teacher should have good CmC skills training, or they can really find themselves doing a lot of unnecessary work. It takes a lot more time to design and run a course online than face-to-face.

(Emily) Time/Workload--how much time can students commit to Web activities. I seemed often to plan too much--more than one paper to read in a week, or several Websites to explore seemed to be too much for most participants in a free course. In paid courses, I tried to include just as much material as I would in a graduate seminar in a land-based course, but some students had trouble keeping up.

The last pedagogical issue that was mentioned is related to the problems that

the participants came across while implementing web-based courses. The

participants mentioned a variety of problems related to WBI. These problems

stemmed from students' interactivity and ignorance of CmC tools, students who

resisted a new type of instruction, the system that was developed by the institution

and used in WBI.

Participants commented on some implementation problems that were linked

to interactivity and students who were using the CmC tools. The reasons of these

problems were due to students' ignorance about CmC tools. When students were

asked to interact with each other or with their teacher, some had difficulties.

(Emily) I wanted to have a personal connection to students and so tried to use chat on a regular basis. However, I found only a handful of students were willing or able to use it, and even then, most of those did not understand why it might be a valuable activity. This might be because some of them used chat only socially, but also it might relate to time and technology issues; even though chat is quite do-able in dialup mode, a full hour of connection time might be very expensive for some.

(Mirella) Some people do not like this way of instruction very much though others love it. Complete ignorance about different possibilities of CMC tools.

(Fusun) The problem is keeping the discussions going on throughout the course and keeping the course participants on task/track are the problems.

(Simon) A big problem in our CCTD course was dropouts....learners tend to feel alone' in a WBI course, and the teachers really have trouble trying to maintain a feeling of a group without meeting face-to-face. In fact, the most successful adult learners tend to be those that like to work alone, or those that are able to create the 'virtual support groups' themselves with their peers. We tried to foster this approach by encouraging a 'buddy system', which worked to some extent.

(Ali) I had a few students who resisted using WBI. For those, I provided an option to turn their assignments on paper.

Issues Related to Future Directions

There were a few themes that emerged in the analysis of participants' comments about future directions in WBI. These themes were teachers' ideas and attitudes towards web-based instruction, where they see WBI in the future, the benefits they get from WBI, and suggestions related to design and implementation issues.

According to participants' responses, it can be stated that all the participants felt positive about teaching their courses through the Web, as they all stated that they wanted to continue their teaching on the Web. Some of them mentioned that teaching online courses would be their priority, but it would never replace the role of the teacher. Some mention that with the help of WBI, they improved their computer skills and their knowledge about non-face-to-face instructional environments.

(Ali) I am in the process of developing my own course management system where I would be able to experiment more. I definitely would like to use WBI in my teaching process.

(Simon) Personally, I would like to continue developing collaborative projects with my colleagues. The area is so vast, that one cannot hope to even scratch the surface alone; teamwork is essential. The technology is changing so quickly that one gets this feeling that you will never catch up and constantly be on the verge of incompetence.

(Emily) I teach almost exclusively on the Web now, and would like to expand my repertoire of types of courses.

(Mirella) I would like to give some kind of a subject at the university of this topic, that I love it, but If I don't get it perhaps I set up my own

business to created course based on this methodology and train other teachers on this field.

(Fusun) It would be my first choice when there is a potential/option.

(Aysen) I have found WBI instruction to be the type of teaching style that I would prefer to do full-time. This has been a very good and beneficial experience.

(Arzu) I am using Web tools now and, in the future, I will use it more than a tool as it's invaluable. I'd like to continue it as it has enrichment for both teachers and students.

When the future of web-based courses was considered, participants were

generally in agreement that WBI is the future of education. They felt that its

continued evolution depended on more people becoming involved in it. However,

some of them stated that WBI would never replace the teacher in learning.

Nevertheless, in WBI the role of teachers would change to being a facilitator.

(Emily) WBI is definitely the future of education--not exclusively, but most certainly as a part of almost every course, and most conference presentations. I think WBI degree programs will expand enormously in the next 5 years, and will be a very natural extension of land-based university offerings. Education anywhere, anytime is definitely an ideal that can easily be attained.

(Fusun) I think every course even in class based will be supported by WBI.

(Aysen) I believe WBI has a lot of potential because there are a lot of people who do not have the chance to attend face-to-face courses due to many reasons (i.e. financial..) so there are a lot of people this could be beneficial for. Other than that it's also an alternative to face-to-face courses, as a lot of people also don't like the idea of being in a classroom. It's also a great environment for personal and professional development... I think it has a lot of potential.

(Arzu) If the system is used as supplementary, it's wonderful but if it's used instead of a teacher, I don't think it will work. Somebody has to update the system and it's a complex issue. Nothing is static.

(Simon) Definitely a lot of potential in ELT. Once teachers in general start to be able to benefit from CMTs (e.g. WebCT) and the e-class management side (LMS, automatic quiz marking, etc.) as well as encouraging students to collaborate in using techniques like discussion board, chat logs, etc., the momentum will start to grow. The average

classroom teacher is the key in this equation...if they don't see a need (or an immediate benefit to them) then WBI will remain as something nice, but not necessary.

Most of the participants state that they benefited from WBI because while designing and implementing it, their knowledge of WBI and computer skills have increased.

(Fusun) I have personally developed lots of computer skills.

(Aysen) Now I have the experience and knowledge of how to direct a non f2f instruction as before it was only theoretical...I also now know what I should have done to help the course be more effective...for example, I should have organised the chat sessions more in advance...but this has helped find out that these chat sessions also need to be more structured.

(Emily) I think my own ingenuity as a teacher has increased. I am continually exploring new tools, new Websites, new ways of approaching the cyber classroom.

(Ali) It is a new experience with new ideas. First, I did not need to grade papers with pencils. They were all online, and I could send my feedback immediately.

(Simon) I feel actually more in touch with students in a web-based environment, as they often seem to express themselves better via CmC than face-to-face.

The last concept that was emerged in participants' responses was about teachers' suggestions about design and implementation issues. Participants suggested being aware of the fact that time spent on design and implementation takes more time, having teamwork and preparing well-planned or structured courses which students can follow easily were some of issues that were mentioned.

Some participants pointed out the time issue in the section on future directions. They stated that when compared to face-to-face instruction, WBI takes more time in design and implementation. The teacher had to be available in the online environment and this requirement also takes more time when compared to face-to-face instruction.

(Fusun) They should know that it takes time. It is impossible to transfer things on paper as they are to an online environment.

(Fusun) Like we are available in class, all the time we should be available in the online environment too.

(Aysen) One needs to be available quite often, attend chat sessions or organise chat sessions at 2 or 3 times a week, you must be prompt with feedback especially when answering emails on queries about the course or teaching point.

(Mirella) To have everything very well planned and structured before begining to work. To mark the process to be followed by the students very clearly. To be always ready for any tutorial.

Teamwork, like time, was also raised as an important issue in this section by some of the participants. Since WBI is a new kind of instruction, there are many steps to be taken while designing and implementing web-based courses and it would make things work better when the design and implementation are worked on as a group.

(Ali) Collaboration with a design team. Disseminate research findings.

(Simon) Teamwork is essential, sharing the load and also exchanging ideas.

(Arzu) You need team support and also you need to contact people.

The last issue that was mentioned by many participants was having a well-planned course for WBI. Since this is a new medium in teaching and students are on their own most of the time, participants suggested that the course should be structured carefully. Everything has to be clear and easy to follow.

(Aysen) The design of the course needs to be very self-explanatory, very plain..to the point. Everything put on a page has to be for the purpose of the course, not just to be pretty or interesting...one must think of the users as they'll be using your pages for hours so it shouldn't be tiring or filled with unnecessary animations.

(Mirella) To have everything very well planned and structured before begining to work. To mark the process to be followed by the students very clearly. To be always ready for any tutorial, save everything the students do in an ordered way.

(Simon) Keep it simple, remember students seldom read instructions, and build your pages accordingly.

Conclusion

In this chapter, the results of the questionnaire and the interview were presented and analyzed qualitatively. In the next chapter, a discussion of the results will be made in order to reach final conclusions and and to draw implications for practice and further research.

CHAPTER 5: CONCLUSION

Introduction

This research study investigates the factors that the course designers have taken into account in the design and implementation of web-based courses, how the design and implementation of the web-based courses were effected by these factors, and course designers' views of possible future directions for developing and implementing web-based courses. The purpose of this study is to make recommendations about design and implementation of web-based language courses for Bilkent University School of English Language (BUSEL), which is thinking of initiating WBI courses in the near future.

Nine volunteer EFL teachers, at institutions in four different countries, who have designed and implemented web-based courses for higher education settings voluntarily participated in my research study. Eight of them were asked to complete a questionnaire consisting of 29 open-ended questions, and one of the participants was interviewed. The questionnaire was sent to the participants through email in four different sections. The interview consisted of the same questions as the questionnaire. After the data were collected, they were analyzed qualitatively in order to answer the research questions guiding the study:

1   What factors have course designers taken into account in the design and implementation of web-based courses?

2   How were the design and implementation of the web-based courses effected by these factors?

3   Where do the course designers see themselves going in the future in web-based course design?

In this chapter, the findings will be discussed in connection with the literature, pedagogical implications where suggestions are made to BUSEL will be detailed, and implications for future research will be presented.

Discussion of Findings

The main purpose of this study was to find out the factors that the course designers have taken into account in the design and implementation of web-based courses, how the design and implementation of the web-based courses were effected by these factors, and course designers' views of possible future directions for developing and implementing web-based courses they foresee in order to make recommendations about the design and implementation issues of web-based language courses for BUSEL. Three sets of factors emerged as having the greatest impact in WBI. These factors are student concerns, pedagogical concerns, and technical concerns.

Student Concerns

The participants raised motivation, learner autonomy, and learners' needs in terms of developing linguistic and computer skills to support academic success as key student issues in WBI. These themes, with the exception of developing computer skills, are not very different from the themes that the course designers take into consideration while designing and implementing traditional courses. Harrison & Bergen (2000) believe that "the first time a course is presented online, it may be similar in format to its traditional counterpart, but developing a successful online course is an ongoing process" (p. 57).

Student motivation and learner autonomy can be increased by providing them with opportunities to take control of their own learning through WBI. As Dickinson (1993) mentions, learner autonomy refers to "the degree of the learner's taking

responsibility for his/her own learning" (p. 330). Learner autonomy can be achieved by allowing students to take over the class and lead their own learning, as well as work at their own pace. WBI allows the teacher to assume the role of a guide or a facilitator most of the time. Students' success depends on students' being self-motivated and independent learners. However, as Weston and Barker (2001) remind us, not all students have the discipline or the tendency to work independently; therefore, learners' ability to work independently should be taken into consideration before starting the design and implementation of a web-based course.

Meeting learners' needs is a major issue while designing a web-based course because the main aim of course design is to meet learners' needs and provide them with the best possible learning environment. Target needs (i.e., what students need to learn and for what purposes), and learning needs (i.e., how they expect to learn and what motivates them) should be in harmony in order to increase the quality of their learning (Hutchinson & Waters, 1986). Learners need to develop both linguistic skills and computer skills in WBI in order to be successful. WBI is not chosen as a new medium of delivery, but it provides learners with CmC tools which help learners to improve their linguistic skills. With the help of visual and audio tools, each student has the chance to improve their linguistic skills. There are a number of software programs that aim to improve different linguistic skills and students can even study on their own without the support of the teacher.

Students' knowledge of computer skills is another important issue. If the students' knowledge of the computer skills that are needed for web-based instruction is not sufficient, this lack of knowledge may lead to frustration and failure in web-based instruction (Pekel, 2002). Students need to be familiar with how to send emails, attend chat discussions, and send messages to bulletin boards. Koroghlanian

and Brinkerhoff (2000) state that while students may be quite good at reading, sending emails, and surfing on the Web, they may feel less capable when it comes to more technical skills during a web-based course. Therefore, it would be beneficial to have a training program for the students before the web-based course to provide them with necessary computer skills and prevent possible problems that they might have during the online course. Vrasidas and McIsaac (1999) also point out the importance of having an orientation, which could be face-to-face, at the early stages of the course. This orientation program could include a training component that may decrease the anxiety level or fear of unknown that students might have for WBI.

Technical Concerns

Technical concerns related to WBI can be grouped under two overarching issues: technical concerns for teachers and technical concerns for students. Since technical concerns for students were mentioned above, technical concerns for teachers will be emphasized in this section.

The results of the questionnaire and the interview show that the participants have different points of view on teachers' need to have technical skills. While some participants stated that designers and teachers should have technical knowledge while designing and implementing web-based courses, other participants believed that it would be more appropriate to solicit support from technical staff while designing and implementing web-based courses in order to use time more efficiently. Regardless of whether the work is done independently or with support, they all believed that technical concerns, such as software selection, are the ones which designers have to pay much more attention to because most of the time, language teachers do not have well developed knowledge about technical issues. Since learning new technology can be time consuming for language teachers who have to

take care of many other issues during the learning/teaching process, teamwork and sharing the workload might solve this problem. Weston and Barker (2001) also mention that university instructors are the content experts and are rarely trained as instructional designers or computer programmers. Therefore, they believe that working with technical experts would help the development of successful Web-based courses.

Although it is possible for teachers to get technical help in design, they need to acquire certain technical skills such as being able to use CmC tools while implementing their online courses. When they are interacting with their students, they need to use these tools effectively and efficiently in order to affect the nature of the interaction positively.

Pedagogical Concerns

Most participants mentioned that there is a difference between face-to-face instruction and non-face-to-face instruction in terms of pedagogy. Some of the participants believed that the pedagogy of non-face-to-face instruction was more challenging as instructors needed to develop new teaching skills to implement WBI. They need to be aware that WBI may demand extra time for course development and implementation, especially to meet student needs for support. Both students and teachers need to have certain CmC skills to accomplish interaction which is different from the traditional classroom environment successfully because interaction is essential in WBI in order to achieve desired outcomes.

Some participants mentioned that it was difficult to deal with teacher-student interaction in WBI because having a teacher-student interaction was not as easy as it had been in face-to-face interaction. The most important factor that affected this issue was that learners' lack of knowledge about communication tools in WBI. Since

they do not want to be embarrassed in front of their friends just because they are not familiar with the technology of instruction, it would be advisable to have a training session before implementing a web-based course for students. As was mentioned before, having training about CmC tools for teachers is crucial as well, since they too need to know how to send emails and attend chat discussions to interact with students and observe students' progress with the help of these tools.

Time is an important pedagogical factor, mentioned by many participants, which comes into play when designing and implementing web-based courses. They stated that when web-based instruction was compared to face-to-face instruction, it took more time during the design and implementation stages. The teachers had to spend a lot of time in trying to find the best design, they spent a lot more time in designing the web-based course as it is a novelty, and they had limited knowledge on how to design and implement an online course on the web. In addition, they also had to be available in the online environment, as students might need their support whenever they came across a problem.

<div align="center">Pedagogical Implications</div>

Because WBI is a fairly new endeavor worldwide, and also very new at BUSEL, it is best to examine what others have done and learn from their experiences. Thus, it is essential to take the issues mentioned in the previous section into consideration while designing and implementing a web-based course. In particular, stress should be placed on developing an effective team of course developers, providing a proper orientation to teachers and students, and receiving support from administrators.

It would be advisable for BUSEL to start WBI with a group of people who can work as a team. These people need to have some knowledge about how to design language courses, as well as some knowledge about web-based instruction. The value

of teamwork cannot be over emphasized because the workload and time spent can be lessened if the work is shared among people. Furthermore, the quality of the product can be enhanced as a result of the contributions of many. Colleagues can give feedback to their colleagues on aspects of the course, at design and implementation stage. Colleagues can also challenge each other to find the best solutions to problems they encounter with WBI.

There should also be a technical staff available which can help these teachers with the technical issues that arise during the related to design and implementation of the web-based instruction project. Technical support staff can deal with the technical problems that teachers and students may encounter. This will affect the workload and time issues that teachers have to deal with positively.

There should be an orientation program for the teachers who will design and implement an online course. Teachers need to know what WBI is and they need to have a general understanding of how it works. In addition, teachers should also know how to use the CmC tools effectively beforehand, as it would lessen their time demands and workload during the design and implementation stages of course development. The teachers should be aware of the fact that WBI requires more time than they spend on traditional classrooms, as they need to be online in order to support students and give them feedback individually.

Students should also attend an orientation program before the web-based course starts as even the ones who know how to surf on the Internet may have problems when it comes to using CmC tools. Students who have never used computers for instruction before may feel uncomfortable and resist this new medium as they are used to traditional classroom instruction. As an extension to the orientation, teachers should state course objectives, benefits of web-based instruction,

and what is expected from the learners in a face-to-face environment in an explicit, but friendly manner. As the medium is new to the students, having various forms of orientation may reduce the anxiety level of students.

The institutions also need to update computers and purchase software programs that will be used during WBI. The administrators should support making these purchases a priority.

<div align="center">Implications for Future Research</div>

The specific findings of this study lead to the following recommendations for further studies. This study can be replicated with one institution as a case study, with interviews with different people who have different roles. The study can be focused on the teacher's view on the design and implementation, the technical staff's view on the design and implementation and finally on the views of students who have attended the web-based courses about its design and implementation. The teacher, her technical staff and the students can be interviewed separately. Interviews might be a better instrument for gathering data as they allow immediate clarification questions and feedback. These participants' observations about WBI could be very helpful to see how WBI works. The teacher and students can also be asked to keep journals and their ideas can be viewed in detail from these journals. Computer logs can also be a beneficial data source to have an idea about the processes of WBI.

Alternative research methods can be used instead of using email to deliver the questionnaire. Chat room discussions might be more beneficial as the researcher can ask more detailed questions, in response to participants' answers. Chat rooms might also support small group discussions among, for example, course designers. There would be a genuine discussion environment where people could respond to and add to each other's ideas.

Once BUSEL establishes a team to work on WBI, research might be done on how the team works together to resolve problems in the design and implementation processes for WBI. This might be beneficial as the findings of the study might give insights about how teams work and what can be done to increase their efficiency.

Limitations of the Study

There were problems that I came across while conducting my research which affected the design of my instrument and limited the amount of data that could be gathered. My limited knowledge about web-based instruction and computers, problems in designing and piloting the instrument, finding suitable participants, receiving data from the participants and the reliability of data analysis are the limitations of the study.

Since I did not have enough knowledge about web-based instruction, I had difficulty in understanding some of my resources, as the terminology that was used in some articles and books was new for me. In addition, because I did not know how to use chat rooms, I did not have had the chance to use chat sessions to collect data. If I had had the necessary computer mediated communication (CmC) tool skills, I could have gathered my data more effectively since I would have been able to ask clarification questions when it was needed in the data gathering process.

It would have been much better if I had been able to pilot my questionnaire as some of my participants did not understand some of the questions and answered them from perspectives different from those anticipated. I could have modified those questions which were problematic in the analysis stage of the study if I had piloted the questionnaire.

Some of my participants told me, after completing the questionnaire, that they had to keep their responses short, because they found the number of questions

excessive. They told me that although they had a lot to say, they had kept their responses short because they did not have enough time and they did not want to write extensively.

I had to email my questionnaire to my participants since they live in different parts of the world. It was a great opportunity for me to reach my participants in a short time. However, I had some difficulties in getting responses from my participants for many different reasons. Most of them sent their responses later than the expected time due to their heavy workloads. Sometimes they forgot to send their responses and I had to send them reminders.

Some of my participants could not respond to every section of my questionnaire. For example, some participants did not have much to say about design or implementation since they had not taken part in those stages of course development.

This study would have greater reliability and less subjectivity if I had asked other people to classify the data because they might have come up with different themes than those which I analyzed in the questionnaire and interview data.

Conclusion

The multiple case study reported here focused on the design and implementation of web-based language courses and what can be learnt from the experiences of English language teaching professionals who have designed and implemented WBI. WBI is a new trend in education in Turkey and before designing and implementing courses using this new medium in BUSEL, information about design and implementation processes, potential problems, and solutions should be reviewed. The results of the study show that it is important to take student concerns, technical concerns, and pedagogical concerns into consideration before designing

and implementing web-based courses. The results suggest a need for teams of teachers to work together to reduce potential problems in WBI and maximize efficiency in the process. They also call for both teachers and students to receive orientations into the process of WBI before commencing it.

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APPENDICES

Appendix A: Web addresses of sites mentioned in the study

Dave's ESL Café http://www.eslcafe.com/

Digital Education network http://digitalequity.edreform.net/resource/1064

The Linguistic Funland TESL http://www.linguistic-funland.com/index.cgi

TESL-L & TESLCA-L http://www.hunter.cuny.edu/~tesl-l/

AskERIC http://www.askeric.org/

EV ONLINE

http://academics.smcvt.edu/cbauerramazani/TESOL/EVOL/evol2003.htm

EV ONLINE WEBHEADS

http://www.geocities.com/vance_stevens/papers/evonline2002/webheads.htm

Appendix B: Questionnaire

Section A. Background

1   What nationality are you?

2   What university do you teach in?

3   How long have you taught English?

4   How long have you been teaching English in your current department?

5   How long have you been teaching English through web-based instruction?

6   What kind of courses do you provide on the web?

7   Did you have any kind of training for WBI at your institution?

Section B. Designing the WBI

1   Why did you want to design a web-based course?

2   Did you need to develop new skills to design a web-based course? If yes, what were those skills?

3   How much time did it take to design a web-based course?

4   What level of expertise did you need to design classes for web-based courses?

5   In what ways does using WBI match your personal teaching style?

6   What kind of stages/process did you go through while designing your web-based course?

7   What were some of the problems you encountered while designing your web-based courses? How did you solve these problems?

8   How did you deal with learning the technological requirements of designing your web-based course?

9   How did you design your course to facilitate non-face-to-face instruction? e.g. How did you develop materials for non-face-to-face instruction?

10   What student factors do you take into consideration to design classes for

web-based courses?

Section C. Implementing WBI

1   What are some of the issues that a teacher must consider while

implementing web-based courses? What kind of stages/process did you

go through while implementing your web-based courses?

2   What were some of the problems that you encountered while

implementing your web-based course? How did you solve these

problems?

3   What are the similarities and differences between WBI and traditional

classroom in the following areas:

a. teaching

b. interaction

c. feedback

d. assessment

4   What types of activities have been successful/unsuccessful in your web-

based course? Why?

5   What level of interaction occurs between student-student and student-

teacher in your course?

6   What is students' reaction to non-face-to-face interaction? What are the

effects of WBI that you have observed on the students?

7   Did the students in your course have any kind of training for WBI ? If not,

how did you cope with that?

8   Did you get any support while implementing web-based courses? If yes,

what kind of support?

Section D. Future Directions

1   What benefits have you received from the web-based classroom?

2   Where do you see yourself going with WBI in the future?

3   Where do you see WBI in general going?

4   What kind of suggestions would you make for teachers who would like

        to teach through the web? Suggestions about:

            i. design

            ii. implementation (teaching, interaction, assessment, feedback)

Appendix C: Sample Interview Transcript

Section 2. Designing the WBI

Researcher: Why did you want to design a web-based course?

Participant: I wanted students to be very close to the reading material and also to be very creative. In addition to that, I wanted to design a web-based course which includes pictures, music and textbook information that led students to be more creative. My major aim was to improve Ss' creativity and I reached my aim through the material particularly for the course. When I use the material in class, I don't feel that Ss have one-to-one kind of relation with the material so when they work on the web, there is a personal kind of relationship with the course. They can also reach me whenever they want. Otherwise, they only see me once a week for 3 hours.

Researcher: Did you need to develop new skills to design a web-based course? If yes, what were those skills?

Participant: No, because I had an assistant who has great computer skills training. He helped me when designing the web-based course. He is good at technical issues therefore; I didn't need to develop any new skills to design a web-based course.

Researcher: How much time did it take to design a web-based course?

Participant: Actually it took 1 year but for the past 5 years I have been working on it, since 1998. I am still improving different sections. During those years, we had many technical issues to be done and proof reading also took some time. Sometimes I added new vocabulary. It seemed easy but it took quite a long time to do things like arranging the visuals, characters. Even smallest issues such as characters or visuals took quite a long time.

Researcher: What level of expertise did you need to design classes for web-based courses?

Participant: I had that assistant who had high capability. He was so creative so we got along well. He understood what I wanted and designed the things in the way I imagined. He had no limitations and he always found a way to do the things. He was very interested in computers and he was from the computer informatics institute. He had been working with computers for more than 10 years. He designed the web-based course according to the regulations set by informatics institute. The institute asked the lecturers whether they were interested in designing to web-based courses and I was. The institute provided the technology and we designed our courses with their support.

Researcher: In what ways does using WBI match your personal teaching style?

Participant: It takes quite a long time. For instance, the instruction is 3 hours. During those 3 hours some students might have pay less attention, however, each student involves in the lesson and they interact with me individually. Students have to deal with lots of vocabulary, themes and bridging activities and they have to answer open-ended questions and every student sent an email and I think I could appeal their individual needs and it's worth it. Although teacher had a lot of workload, I enjoyed it.

Researcher: What kind of stages/process did you go through while designing your web-based course?

Participant: I collected material in the past years maybe since 1990, not with the aim of WBI, but teaching English. Then, I went through a creative process. I found suitable music and pictures. A sample lesson took 3-6 hours and it had a short story, different pictures and music. My major aim was to change the mental map

of students, to provide elements for them to become higher readers and reading was a tool. I wanted my students to understand a global issue at the first stage. I have collected different types of material for 7-8 years. I decided to use which poem with which music and then started writing questions such as inference questions, personal questions. I tried to help them to have higher thinking skills. Students came up with their own creative essays then I put them on the web. Sometimes we needed to elaborate find people who can draw pictures for them. My aim was to expand their neuro thinking. I intended to activate many intelligences.

Researcher: What were some of the problems you encountered while designing your web-based courses? How did you solve these problems?

Participant: There were only 2 problems. The time I spent designing technology, I was using message boxes and the programs that some students used didn't have them. Then, I decided to on emails. Students used their emails. The second problem, I wanted the curser in the form of an angel and someone designed it and at that time we didn't have fairy with a magic wand and the students didn't react it.

Researcher: How did you deal with learning the technological requirements of designing your web-based course?

Participant: With the help of my assistant. He didn't use front page and I didn't have time to learn all that stuff and I found someone who was in the business.

Researcher: How did you design your course to facilitate non-face-to-face instruction? e.g. How did you develop materials for non-face-to-face instruction?

Participant: I think I answered that question previously.

Researcher: What student factors do you take into consideration to design classes for web-based courses?

Participant: My major criteria based on the fact that students first want to attend a web class. Students must have some background of English. They have to know reading, mastery of grammar, write something and computer skills. All of them knew how to use a computer. I can say that basic English skills and computer skills are needed.

Appendix D: Sample Data with Coding

This is a sample document to show how I used color-coding and margin notes for my

data analysis section.

2   Did you need to develop new skills to design a web-based course? If yes,
       what were those skills?

Aysen No

Ali

Yes. Web programming skills, skills in using the Internet technologies (web, email,

message boards, are some to name). In addition, I needed to develop an

understanding of how hypertext is designed and presented to end users. The

discourse of computer mediated communication.

Simon

Yes -- as can be expected many new skills were basically technical in nature: using a

web page editor (we defaulted to FrontPage), learning basic HTML, experimenting

with various Javascripts and applets, using CGI scripts for things like polls, submit

forms, etc. (since our server didn't support ASP or FP server extensions), multi-

media programs like RealProducer, CoolEdit Pro, graphics/image software like

PhotoShop (I'm still quite hopeless with this!!), learning how to set up a discussion

board (we used Lyris - freeware), learning how to chat (including mIRC and ICQ),

learning basic FLASH (actually we opted for SWISH which was much easier to

learn), learning how to incorporate animated GIFs, learning how to decide on

appropriate media formats (JPEG, MP3, MPEG, etc.). This is just off the top of my

head...other things include mastering peripherals like scanning, digital camera and

data projectors.

For this 'technical side', much was done on a self-development basis. Technically, we would see things in other web pages that we liked and we basically developed techniques to 'borrow' things like Javascripts, web page design, etc. Often we'd 'challenge' each other to figure out how something we saw was done, and then share our solutions. This is an ongoing process.