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E-LEARNING AT HIGHER EDUCATION: A ROADMAP FOR TURKISH HIGHER EDUCATION INSTITUTIONS IN THEIR EFFORTS TO OFFER ONLINE COURSES

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E-LEARNING AT HIGHER EDUCATION: A ROADMAP FOR TURKISH HIGHER EDUCATION INSTITUTIONS IN THEIR EFFORTS TO OFFER ONLINE COURSES

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Approval of the Graduate School of Natural and Applied Sciences

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This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Doctor of Philosophy.

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ABSTRACT

E-LEARNING AT HIGHER EDUCATION: A ROADMAP FOR TURKISH HIGHER EDUCATION INSTITUTIONS IN THEIR EFFORTS TO OFFER ONLINE COURSES

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Higher education institutions, with their mandate of preparing students in view of the requirements, knowledge and skills of the 21st century citizens, are the institutions where the latest information and communication technologies will put into use both for administrative and for instructional purposes within a well-designed framework. Turkish higher education institutions, as well, are in a process of adapting themselves to the recent advancements in information and communication technologies, particularly to provide better services to their on-campus students through these technologies but also for reaching out to more through Internet-based distance education tools. This study, through an in-depth exploration of three graduate degree programs offered online by three pioneer universities in Turkey from conception to implementation, has aimed to provide guidance for other Turkish higher education institutions to launch and implement web-based distance education programs successfully. The study, through interviews and documentary analysis, has traced how the idea of

offering an online degree program has been formed, what administrative and managerial steps have been taken, what cooperative and collaborative relationships have been embraced, what challenges have been encountered, how these challenges have been overcome, what instructional factors have been considered, how faculty have been involved in the process, what lessons have been learned, and what role has been attained to e-learning in the future of higher education in Turkey. Findings of the study have been incorporated within a model for Turkish higher education institutions to realize an e-learning initiative.

Keywords: e-learning, online learning, higher education, distance education.

ÖZ

YÜKSEK ÖĞRETİMDE E-ÖĞRENME: ÇEVRİMİÇİ EĞİTİM VERMEK İSTEYEN TÜRK ÜNİVERSİTELERİ İÇİN BİR YOL HARİTASI

Nişancı, Müge

Doktora, Bilgisayar Eğitimi ve Öğretim Teknolojileri Bölümü

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Öğrencilerini 21inci yüzyılın bilgi, beceri ve gereklilikleri doğrultusunda yetiştirme sorumluluğunda olan yüksek öğretim kurumları, günümüz bilgi ve iletişim teknolojilerinin iyi tasarlanmış bir çerçeve içerisinde idari ve öğretimsel amaçlar için uygulamaya konduğu kurumlardır. Türkiye'deki yüksek öğretim kurumları da, gerek örgün öğrencilerine daha iyi hizmet vermek gerekse Internet tabanlı uzaktan eğitim araçları ile daha geniş bir yelpazeye ulaşabilmek amacıyla, bilgi ve iletişim teknolojilerinde yaşanan gelişmelere ayak uydurma sürecine girmişlerdir. Bu çalışma, Türkiye'deki üç öncü üniversite tarafından çevrimiçi olarak verilmekte olan lisansüstü eğitim programlarının kavram aşamasından uygulama aşamasına derinlemesine bir incelemesini yapmak suretiyle, web tabanlı uzaktan eğitim programları başlatmak ve uygulamak isteyen diğer Türk üniversiteleri için bir rehber oluşturma amacıyla ortaya çıkmıştır. Çalışma, görüşmeler ve belge analizleri yoluyla, elektronik ortamda lisansüstü eğitim verme fikrinin nasıl oluştuğunu, hangi idari ve yönetsel önlemlerin alındığını, hangi işbirliği çalışmalarının benimsendiğini,

hangi sıkıntılarla karşılaşıldığını, hangi öğretimsel kaygıların gözönüne alındığını, öğretim üyelerinin sürece nasıl dahil olduklarını, hangi derslerin edinildiğini ve Türk yüksek öğretiminin geleceğinde e-öğrenmenin rolünü ortaya koymaktadır. Çalışma sonucunda elde edilen bulgular, Türkiye'de yüksek öğretim kurumlarının e-öğrenme faaliyetlerinde faydalanacakları bir model oluşturmada kullanılmıştır.

Anahtar Kelimeler: e-öğrenme, çevrimiçi öğrenme, uzaktan eğitim, yükseK öğretim.

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INTRODUCTION

> Education doesn't make you happy, nor does freedom. We don't become happy just because we're free, if we are, or because we've been educated, if we have, but because education may be the means by which we realise we are happy. It opens our eyes, our ears. It tells us where delights are lurking – convinces us that there is only one freedom of any importance whatsoever, that of the mind, and gives us the assurance, the confidence to walk the path our mind, our educated mind offers.
>
> *Iris Murdoch, Writer and Lecturer*

1.1. BACKGROUND

Education, being an investment in human capital, helps to maintain social and economic welfare, contributing to the personal and social development of individuals to have them such citizens adding value to the stability of their countries. In this respect, higher education institutions undertake greater responsibility for training those individuals as citizens equipped with knowledge and skills considered vital in view of the most recent developments in the world, the most important of which is the advancement of information and communication technologies (ICT) occupying even our daily lives.

Cynthia Guttman (2003), in *Education in and for the Information Society*, defines these technologies as "engines of growth and tools for empowerment."

> They have the potential to widen access to education at all levels, to overcome geographical distances, to multiply training opportunities, and to empower teachers and learners through access to information and innovative learning approaches – both in the classroom, from a distance, and in non-formal settings. Specialists widely agree that without judicious of technology, defined in the broadest sense to encompass radio, television and computers, many developing countries will be unable to satisfy the basic needs of all children, youth and adults, nor will they be in a position to meet the rising demand for higher and continuing education (p.9).

New realities, coming into the foreground with and caused by the "knowledge revolution" experienced in the late twentieth century, do not surpass the traditional goals of higher education, yet are there many overlaps. These new realities and traditional goals of higher education, taken together, leads to a powerful argument for developing higher education (World Bank, 2000).

Keeping their traditional goals in mind, thus, higher education institutions will be challenged to respond to these new realities, and to the varying needs and interests of the new generation of students, who are becoming more and more conscious about the importance of knowledge for social and economic development.

Malcolm Knowles points out to this striking transformation in 1984 as follows:

> We are nearing the end of the era of our edifice complex and its basic belief that respectable learning takes place only in buildings and on campuses. Adults are beginning to demand that their learning take place at a time, place, and pace convenient to them... Our great challenge now is to find ways to

> maintain the human touch as we learn to use the media in new ways (p.32).

Acknowledging this challenge, measures are being taken throughout the world either by governments or institutions themselves, or by international and supranational entities. These measures, either in the form of policy papers or of reports and task forces, implied the importance of the promotion of a long-term vision, priority for equipment and infrastructure, Internet-related services, establishment of partnerships with industry, continuation of efforts, long term consistency, provision of training on a more widespread basis, and, perchance the most importantly, of the fact that education and training systems have to reflect on the new realities and trends when defining the shape and content of learning.

Higher education institutions' success depends on well-designed academic programs and a clear mission. Other important factors to the success of higher education institutions are dedicated and well-prepared students, sufficient resources, and qualified faculty. In many institutions, students face with many difficulties ranging from crowded classrooms and inadequate library facilities to limited students' services. Roots of most of the problems experienced by higher education institutions are on inadequate resources. Most public universities are very much dependent on governments for their financing, and have poorly managed budgets.

What is critical to the quality of higher education is the existence of qualified and highly motivated faculty. Higher education institutions are also dependent on the commitment of their faculty. Faculty's commitment and availability both to their students and to their colleagues is one of the major factors for creating a learning environment, which promotes and encourages learning. It is clear that faculty will play a critical role in higher education institutions' efforts to adapt themselves to the new realities and trends, amongst which the ICT are at the foreground.

Recent estimates indicate that higher education institutions invest a huge amount of money and allocated a major part of their resources to the acquisition of ICT. As Daniel (1997) puts is, instructional use of ICT may increase the efficiency of teaching-learning connections or even transform the educational processes with regard to the concepts of "distance learning" and "life-long learning." In respect to the tremendous growth of technology-mediated learning activities in higher education institutions as a result of the advancement of information and communication technologies, the Institute for Higher Education Policy quotes from the U.S. Department of Education's National Centre for Education Statistics that "from 1994-95 to 1997-98 the number of distance education programs increased by seven percent." (2000).

Such changes and transformations in the teaching-learning process are emphasized by several researchers, new approaches of research are being applied to investigate exclusive issues in this area, and the amount of these studies are increasing day by day (Kulik & Kulik, 1980, 1991; Ehrmann, 1995; Reigeluth, 1989). In most of the cases, integration of ICT into teaching-learning process has also transformed the role of teachers from traditional "information-provider" to contemporary "coach" and "facilitator", and of students from being passive receivers of information to active participants in the learning process. In this context, Sherry and Gibson (2000) note "the required shift is far greater," quoting Carroll (2000).

However, in spite of sizable body of research indicating the increasing use of ICT by teaching staff for instructional purposes, neither IT has become integrated in the teaching-learning process nor adoption and diffusion of ICT has been experienced as it has been intended (Geoghegan, 1994). There are barriers to the integration of ICT, and these barriers prevent the adoption and diffusion of technology by higher education institutions, as well as other wide range of organizations. The adoption and diffusion issues have also been the subject of many researches for the last

decades, most of which have been based on the Rogers' general diffusion of innovations theory (Burkman, 1987; Hall & Hord, 1987; Ely, 1999; Stokdill & Morehouse, 1992; Farquhar & Surry, 1994). Based on these instructional technology diffusion theories, researchers are still trying to investigate the underlying factors of resistance and hesitance for ICT use by some teaching staff, despite some others' enthusiasm, motivation and readiness (Jacobsen, 1998).

National Education Association (NEA) (2000) reports in as a result of their survey on NEA member higher education faculty that only 51% of the traditional faculty holds positive views about distance learning, compared to 72% of the technology using faculty holding positive opinions. NEA also emphasizes that 28% of the traditional faculty hold not negative views, but prefer remaining "undecided" waiting for the implications.

On the other hand, going back to the 'sizable body of research indicating the increasing use of ICT by teaching staff for instructional purposes', it is clear that, recently, the higher education institutions have started to make use of ICT greater than ever before. Unquestionably, further studies shall be considered necessary for potential spread of ICT utilization by higher education faculty more efficiently ever more.

1.2. SIGNIFICANCE OF THE STUDY

Changing face of higher education, with its functions and missions revisited, makes it difficult to define modern campus, which "requires multiple descriptions." However, it is easier to see the picture with specific commonalities that modern campuses will have: Anytime-anyplace available learning opportunity, classes constructed of modular learning objects, continuous collaboration, applied research, accessible digital library, and many others (Langenberg & Spicer, 2001). Langenberg & Spicer go on further stating that "the modern campus will come to mean the

totality of the learning environment provided by a higher education institution" where "learners will be everybody the institution connects with teachers," which is "interactive" and "learner-centred." They name this learning model as "the 3Js model (just in time, just for me, and just the right content," and the related information model as "3Rs model (right information, right time and place, right format)" (p.11).

This present study grew out of the crucial need for the higher education institutions to adapt themselves to the new trends and realities experienced by the whole world as a result of the boom of information and communication technologies recently. Integration of the ICT into the teaching and learning process has become inevitable especially by the higher education institutions, main goal of which is to train workforce and to contribute to the social and economic stability of the countries. This study contributes to the knowledge, in the context of Turkey, in terms of offering a roadmap providing recommendations and suggestions for future attempts to offer online courses and/or programmes by Turkish higher education institutions, based on the current experiences and future expectations of key staff of three pioneer Turkish universities offering graduate degree through Internet-based distance education technologies.

1.3. PURPOSE OF THE STUDY

Continuous development of information and communication technologies has had a deep impact on our everyday lives, and led to a transformation in almost every single social institution. Accordingly, higher education institutions are amongst the most affected of these social institutions, and they are facing this challenge deeper with their target audience and the faculty serving to this audience. Higher education institutions, with their mandate of preparing students in view of the requirements, knowledge and skills of the 21st century citizens, are the

institutions where the latest information and communication technologies will put into use both for administrative and for instructional purposes within a well-designed framework.

The purpose of this study is, through an in-depth exploration of three graduate degree programs offered online by three pioneer universities in Turkey from conception to implementation, to provide guidance for other Turkish higher education institutions to launch and implement web-based distance education programs successfully. The study traces how the idea of offering an online degree program has been formed, what administrative and managerial steps have been taken, what cooperative and collaborative relationships have been embraced, what challenges have been encountered, how these challenges have been overcome, what instructional factors have been considered, how faculty have been involved in the process, what lessons have been learned, and what role has been attained to e-learning in the future of higher education in Turkey.

Finally, the study puts forward a guide for Turkish universities in their potential efforts to vary their instructional delivery methods and to take a step forward to the world of online education.

Additional considerations such as unintended outcomes and alternative viewpoints were included as the study progressed.

1.4. RESEARCH QUESTIONS

The anticipated findings of this study are used to draw inferences about web-based distance education applications, and to develop a roadmap for future e-learning initiatives in the Turkish context. The study beholds the following questions:

1. What are the reasons pushing Turkish higher education institutions to go for online learning activities?
2. What administrative and managerial factors are considered and steps taken for a web-based distance learning program, from respondents' perspectives?
3. What instructional factors are considered and how instructional concerns are responded?
4. What challenges are encountered during the planning and implementation process? How these dilemmas are overcome?
5. What is needed for establishment and effective implementation of effective utilization of ICTs for the purposes of providing learning at a distance at higher education level?
6. What are the expectations of policy makers and administrators as to e-learning in Turkish higher education institutions? What steps should be taken to carry Turkish higher education at the expected level?

1.5. OVERVIEW OF RESEARCH METHODOLOGY

1.5.1. Design

This study mainly focuses on conception, decision-making and planning processes of three graduate programs offered online by three universities in Turkey: Eskişehir Anadolu University, Istanbul Bilgi University, and Ankara Middle East Technical University.

Data sources included interviews with key informants from three institutions. Vrasidas and McIsaac (1999) state that "interpretive research focuses on the perspectives of the actors involved and attempts to understand the multiple layers of meaning presented by human action" (p.25). Vice rectors responsible for information technology related activities, program coordinators, and faculty implementers were contacted and asked to participate in the study. Interview questions were developed according to the position of respondents. A different aspect of online education was focused on for each category of respondent. Interviews were documented by digital audio-tape recorder and by hand written notes.

Another data source was chosen to be documentary review. Selected documentation included laws, acts, roadmaps, strategy/policy papers, mission/vision statements, and other documents related to the scope of the study. Besides institutional documentation of the participant institutions of the study, documents were selected among the libraries of the Higher Education Council, the Ministry of National Education, and of international organizations such as the World Bank, the United Nations, and the European Union in order to explore national and supra-national strategies towards the use of information and communication technologies to support and advance web-based distance education at the higher education level.

1.5.2. Delimitations

The study confines itself to examining three online degree programs offered by three Turkish universities, from conception to implementation.

1.5.3. Limitations

This study is limited to subjects who agree to participate voluntarily to participate in interviews. Validity of this study is limited to the reliability of the instruments used, and to the honesty of the subjects' responses to the instruments.

1.6. DEFINITION OF TERMS

Administrator: For the purposes of this study, an administrator of higher education will be confined to chairs of departments or schools, deans of faculties, and rectors and vice rectors.

Distance Education: "It is planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements" (Moore & Kearsley, 1996, p.2)

E-learning: "E-Learning refers to the use of Internet technologies to deliver broad array of solutions that enhance knowledge and performance" (Rosenberg, 2001, p.28).

Internet: Internet is a net of networks that allows the free flow of information by way of computers and telecommunications equipment (Gates, 1996).

Learning Management System (LMS): An LMS is a "software that automates the administration of training events. All Learning Management Systems manage the log-in of registered users, manager course catalogues, record data from learners, and provide reports to management" (Hall, 2003).

Programme Coordinator: For the purposes of this study, a Programme Coordinator is a person who is responsible for effective implementation of a graduate degree programme delivered through electronic tools at a higher education institution.

1.7. CHAPTER OUTLINE

This document consists of five chapters.

Introductory chapter is followed by Chapter Two, which presents a summary of the existing literature pertaining to changing role of higher education, distance education, web-based distance learning, electronic learning and Turkish higher education system with special emphasis on the use of information and communication technologies.

Chapter Three describes the methodology used for this study, along with details on participants, research instruments, data collection procedures, and data analysis.

Chapter Four provides an analysis and interpretation of the data collected.

Finally, Chapter Five discusses the results obtained as a consequence of this research, makes recommendations for those higher education institutions in their attempts to offer online graduate programmes, and identifies implications for future research in this area.

CHAPTER II

LITERATURE REVIEW

Being an investment in human capital, education is one of the ways helping to maintain social and economic welfare, through contributing to the personal and social development of individuals to have them such citizens adding value to the stability of their countries. The recent decades have witnessed the advancement of new information and communication technologies, which have a great impact on the social and economic welfare of the countries. The new realities, coming into the foreground with and caused by the *knowledge revolution* experienced in the late twentieth century, have led higher education institutions undertake greater responsibility for training those individuals as citizens equipped with knowledge and skills considered vital in view of the most recent developments in the world, the most important of which is the advancement of information and communication technologies occupying even our daily lives.

Thus, higher education institutions will be challenged to respond to these new realities, and to the varying needs and interests of the new generation of students. It is clear that administrators and faculty will play a critical role in higher education institutions' efforts to adapt themselves to the new realities and trends, amongst which the ICT are at the foreground.

2.1 CHANGING FACE OF HIGHER EDUCATION

It is possible to take the roots of contemporary higher education back to 400 B.C., to the Plato's Academia, or to 387 B.C., to the Aristotle's Lyceum, followed by Empire Academy of Chine in 124 B.C. Nonetheless, it is not wrong to say that contemporary higher education is almost 900 years old since establishment of epitomes of universities, as the most important symbol of higher education, dates back to the 11th century: University of Bologna in 1088, University of Paris in 1160, Oxford University in 1167 (YÖK, 2004).

UNESCO's report by Guttmann (2003) attracts the attention to the "most spectacular expansion in the history of higher education" starting from the 1960s, when the number of higher education students increased from 13 million to 82 million in 1995, over six-fold worldwide. The same period also witnessed the expansion in the gap between developed, developing and underdeveloped countries in terms of access to education. UNESCO reports that enrolment in higher education is around three percent in underdeveloped countries, whereas it reaches up to 50 percent in developed countries (p.15).

Importance of the role of higher education is emphasized by Rossmann (1992), in terms of achieving the followings (pp.8-9):

- Adequate food for people of the world,
- Adequate health care and housing for all,
- Reduced pollution of air, soil and water
- Justice for the whole world through global governance
- Accomplishment of the goals stated in the UN Declaration on Human Rights
- Economic opportunity for all

- Education for all.

Thus, the recent millennium has witnessed higher education system's contribution to the social and economic welfare through adaptation to changing conditions to respond to the needs of society on a wide spectrum ranging from trained manpower to knowledge production and technology transfer, and will continue to do so. System's role in adapting itself to the progressive nature of the world has been escalated in recent decades.

Of late, as physical capital has become to be superseded by knowledge in terms of being a source of wealth and welfare, the world economy has also experienced a transformation (World Bank, 2000). This transformation process is much led by the technology, showing the way for deep changes in the way we live.

Malcolm Gillis, the President of Rice University, made his remarks accordingly in 12 February 1999 as follows (quoted in World Bank, 2000, p.15):

> Today, more than ever before in human history, the wealth –or poverty– of nations depends on the quality of higher education. Those with a larger repertoire of skills and a greater capacity for learning can look forward to lifetimes of unprecedented economic fulfilment. But in the coming decades the poorly educated face little better than the dreary prospects of lives of quiet desperation.

Knowledge for Development, the 1998-99 World Development Report, lays the issue as follows: "Knowledge is like light. Weightless and intangible, it can easily travel the world, enlightening the lives of people everywhere. Yet billions of people still live in the darkness of poverty – unnecessarily." (1999).

The switch to turn on the light is education. The higher education has never become so important and vital for the future of societies, to enable them to catch up with this knowledge-based ever-increasing race of social and economic development.

Herbert Kohl states that educators and the general public are quite well aware of the new demands and realities "arising from [those] major social and economic transformations that require new skills and approaches to learning" (Quoted in Gooden, 1996).

This new context requires higher level of skills and knowledge. NationsBank Montgomery Securities (1998) reports that 85 percent of the current jobs in the U.S. require an education beyond secondary education level.

Miller lists the following as three factors triggering this said shift: "the change in standards for professional education, the emergence of the adult learner as a significant percentage of student population, and the rise of computer-based technologies that offer new instructional tools" (1998, p.2).

Palloff & Pratt (1999) also speaks of the changing profile of higher education student due to these major social and economic transformations: Besides 'traditional undergraduates', who are those "between the ages of eighteen and twenty-two and attending full-time", there are now "larger number of so-called non-traditional students, as defined by age and life situation."

In view of these prevalent advancements, higher education institutions should reconsider their mission, and accordingly the means for providing education services to students (Johnson & Huff, 2000; Kang, 2001). They should respond to these transformations, demands and realities, and the information technology has the potential to serve as a solution provider to the higher education institutions (Horgan, 1998).

2.2 TEACHING AND LEARNING AT A DISTANCE

2.2.1. Definition

The term ‘distance education’ was first appeared in 1892 catalogue of Wisconsin University, which was utilised by William Lighty, the administrator of the university, in one of his writings in 1906 (Uzaktan Eğitim Vakfı, 1997).

Distance education, open education, distance learning, open learning, telelearning, distributed learning and similar others are terms used to define a learning activity or process occurred where instructor and learner is separated physically.

Many definitions of the field have been made by theorists and practitioners (Dohmen, 1967; Peters, 1973; Moore, 1973; Holmberg, 1982). Keegan (1996), based on a synthesis of these definitions, proposes a definition of distance education with the following basic characteristics:

- The quasi-permanent separation of teacher and learner throughout the length of the learning process;
- The influence of an educational organization both in the planning and preparation of learning materials and in the provision of student support services;
- The use of technical media – print, audio, video or computer – to unite teacher and learner and carry the content of the course;
- The provision of two-way communication so that the student may benefit from or even initiate dialogue; and
- The quasi-permanent absence of the learning group throughout the length of the learning process so that people are usually taught as individuals rather than in groups, with the possibility of occasional meetings, either face-

> to-face or by electronic means, for both didactic and socialization purposes (p.50).

Another definition used to characterise distance education is of Moore & Kearsley's:

> Distance education is planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements (1996, p.2)

The U.S. Department of Education's Office of Education Research and Improvement (Bruder, 1989) defines it as "the application of telecommunications and electronic devices which enable students and learners to receive instruction that originates from some distant location."

Instructional Telecommunications Council's definition sees it as "the process of extending learning, or delivering instructional resource-sharing opportunities, to locations away from a classroom, building or site, to another classroom, building or site by using video, audio, computer, multimedia communications, or some combination of these with other traditional delivery methods."

A common point in all definitions is physical separation of instructor and learner, as well as the time element.

2.2.2. Historical Evolution of Distance Education

Taylor & Swannel (2001) explains the evolution of distance education operation as four generations: "first, the Correspondence Model based on print technologies; second, the Multimedia Model based on print, audio and video technologies; third, the Telelearning Model, based on

applications of telecommunication technologies to provide opportunities for synchronous communication; and fourth, the Flexible Learning Model based on online delivery via the Internet."

Although clearly defined now, Jeffries (2001) states that "the evolution of distance education has not been easy," since "there was more than one historical path to distance education."

Table 1 – Models of Distance Education: A Conceptual Framework

Models of Distance Education and Associated Delivery Technologies	Characteristics of Delivery Technologies				
	Flexibility			Highly Refined Materials	Advanced Interactive Delivery
	Time	Place	Pace		
First Generation: The Correspondence Model					
▪ Print	Yes	Yes	Yes	Yes	No
Second Generation: The Multimedia Model					
▪ Print	Yes	Yes	Yes	Yes	No
▪ Audiotape	Yes	Yes	Yes	Yes	No
▪ Videotape	Yes	Yes	Yes	Yes	No
▪ Computer-based learning (e.g. CML/CAL)	Yes	Yes	Yes	Yes	Yes
▪ Interactive video (disk and tape)	Yes	Yes	Yes	Yes	Yes
Third Generation: The Telelearning Model					
▪ Audiotele conferencing	No	No	No	No	Yes
▪ Video conferencing	No	No	No	No	Yes
▪ Audiographic Communication	No	No	No	Yes	Yes
▪ Broadcast TV/Radio and Audiotele conferencing	No	No	No	Yes	Yes
Fourth Generation: The Flexible Learning Model					
▪ Interactive multimedia (IMM)	Yes	Yes	Yes	Yes	Yes
▪ Internet-based access to WWW resources	Yes	Yes	Yes	Yes	Yes
▪ Computer mediated communication	Yes	Yes	Yes	No	Yes

Source: Taylor & Swannel (2001, p.11)

The starting point of this historical path dates back to late 1700s, when an advertisement in a Swedish newspaper mentioned "composition through the medium of the Post" (Holmberg, 1986). This was followed by the introduction of penny post in Britain by Isaac Pittman in 1840. Pittman also established the Phonographic Correspondence Society, forerunner of Sir Isaac Pittman Correspondence Colleges (Holmberg, 1986).

At the same time, Germany witnessed introduction of language studies through correspondence by Toussaint and Langenscheidt. It was 1870s when the Society to Encourage Studies at Home was established in Boston, which was followed by others in America.

Nonetheless, it was the introduction of audio-visual devices into schools in early 1900s that the technology-based education had its roots. After the first set of instructional films in 1910s (Reiser, 1987), it was in 1913 that Thomas Edison reflected on the invention of film, "Our school system will be completely changed in the next ten years" (Saettler, 1968). Though this change did not happen so dramatically, 1920s were the years in which the instructional activities were supported by slides and motion picture. Successful application by the army during and after the World War II generated an interest in utilization of technology for instructional purposes. Television was started to be utilized by the educators starting from the 1930s.

The last decade witnessed a revolution with the introduction of computer-mediated learning, and a variety of other technologies (Institute for Higher Education Policy, 1999). However, it was not until 1990s when the Internet changed the pace of the world as experienced with the introduction of the penny post in 19th century.

Since the concept of distance learning has evolved, while training institutions have started to integrate these brand new information and communication technologies, government bodies and official organizations have started to develop policies, and researchers have started to examine the

effectiveness and best uses of distance learning. Today, besides on-going research activities on the effectiveness of distance learning, efforts have started to determine the gaps and the holes, which have been left blank by the existing literature.

Verneil & Berge (2000) speaks of the contribution of "the need for life-long learning in a technologically-driven, global economy, and the swift development in the past two decades of two-way, interactive communication" to the "creation of new distance learning programs" (p.13). Major platform for introduction of new distance learning programs, due to their readiness both in terms of infrastructure and of human resources, has become higher education institutions.

2.2.3. Distance Education in Higher Education Institutions

Turkish Council of Education's report titled Turkish Higher Education Today (2004) addresses to 1960s as years Prime Minister Harold Wilson's initiatives to democratize the British higher education, which marks the introduction of institutionalized distance education in the United Kingdom. This initiative resulted with establishment of the Open University in 1969, as an autonomous degree-offering higher education institution. Open University is the first institutional example of a university offering distance education for those learners who do not have the opportunity to attend other higher education institutions.

Distance education, in some countries, is implemented through consortia as joint programs, instead of through autonomous open universities or through relevant units within higher education institutions as individual programs (YOK, 2004). Federation Interuniversitaire de l' Enseignement a Distance (FIED) of France, Consorzio per l'Universita Distanza (CUD) of Italy, Irish National Distance Education Centre of Ireland, Contact North of Canada, Open Learning Australia, and National

University Continuing Education Association of the United States of America are examples of these existences.

There are also profit-making distance education institutions in many countries. In the United States of America, the number of private distance education institutions is around 500, 110 of which are accredited by the National Home Study Council.

It is clear that advancements in information and communication technologies, changing the way people learn, have started to convert the role and place of distance learning within the higher education systems, along with the format and content of it. Today, ICT-based distance education is becoming more and more expanded throughout the world. New possibilities offered through Internet and satellite technologies have allowed for a new industry on education. Private companies and institutions having businesses on computer, Internet and other technologies have become a challenge for traditional higher education institutions, providing brand new opportunities for learners.

Besides, many traditional universities have integrated, or in the progress of integrating online education modules through Internet due to several reasons including, but not limited to, responding to the needs of a wide range of geographically dispersed students (Özdil, 1986) with a brand new profile different than traditional students, embracing a multi-dimensional interaction opportunity between and among learners (Barkan, 1988), instructors and media, flexibility, individualisation, and cost-effectiveness.

2.3 TECHNOLOGY FOR LEARNING: ELECTRONIC LEARNING

The Internet, the World Wide Web and computer-based multimedia are considered to be primary technologies of e-learning (Bates, 2001). Bates speaks of three main ways to make use of electronic learning by higher education institutions: (1) technology-enhanced classroom teaching where the Web and the Internet are integrated into traditional classroom teaching like other technologies through Web pages, PowerPoint presentations, electronically available course materials, etc., (2) distance learning to ensure further access to education opportunities for disadvantaged learners, and (3) distributed learning describing "a mix of deliberately reduced face-to-face teaching and on-line learning" (p.22).

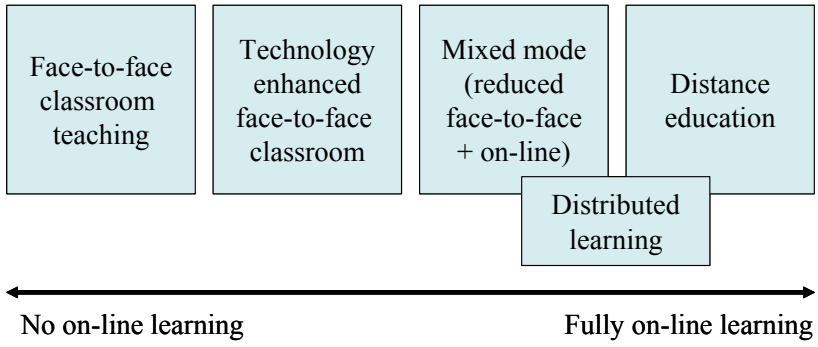


Figure 1 – Continuum of On-line Learning Applications (Bates, 2001)

Bates (2003), in the following table, provides a classification of various technologies that are important for instructional purposes as of media used. It is clear to see from Table 2 that computer technologies and the Internet have a huge potential for educational activities.

Table 2 - A Classification of Educational Technologies by Structural Characteristics

	Technologies			
	Broadcast (one-way) Applications		***Communication (two-way) Applications***	
Media	***Synchronous***	***Asynchronous***	***Synchronous***	***Asynchronous***
Face-to-face		Books		Mail
Audio	Radio	Audio-cassettes	Telephone tutoring Audio-conferencing	
Video	Broadcast TV Cable TV Satellite TV	Video-cassettes	Video-conferencing	
Digital multimedia	Webcasting Audio-streaming Video-streaming	Web sites CD-ROMs DVDs Learning objects Multimedia clips	Chat MUDs Web conferencing	E-mail Discussion forums

Source: Bates (2003, p.55)

Parallel to Bates's aforementioned point, Anderson (2004), speaking of the role and place of interaction in distance learning, illustrates the "common forms of media" in distance education practices and their capacity to support interaction and independence of time and place, along with "capability of the Web to support these modalities" (pp.44-45).

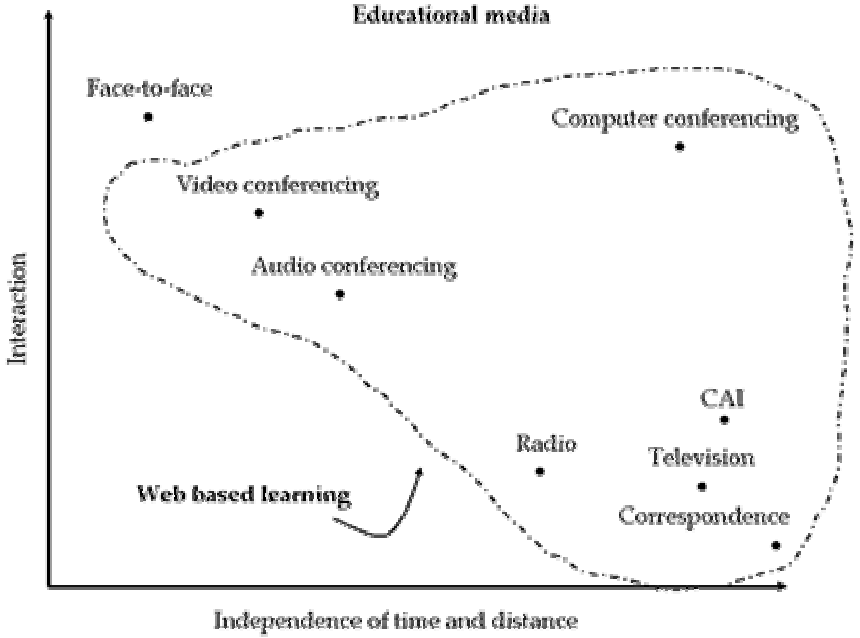


Figure 2 – Educational media subsumed by the Web (Anderson, 2004)

Speaking of interaction in distance education, one should consider individual and social aspects of interaction in which interaction of learner with media, with instructor, and with other learners is there. Interaction at these three levels is ensured with various media and technologies, and the development of Internet technologies has facilitated it to a great extent.

The concept of electronic learning is quite young throughout the world, even in the United States, in view of the fact that the first web-based higher education course appeared only ten years ago in 1995. However,

amongst several arguments as to effectiveness or even so intensive existence of electronic technologies in education, looking at the situation from the perspective of distance learning, the Web is even regarded by some as a saviour of distance education, leading the outgrowth of distance learning from the status of "poor and often unwelcome stepchild" (Phipps & Merisotis, 1999, p.29) to a key role as a significant and vital facet of higher education.

This role that web-based distance learning has attained is considered as a means to respond to society's educational needs, which have shifted from traditional training of full-time on-campus learners to more unconventional forms of education (Jones & Pritchard, 1999).

In the Higher Education Review (1997), as well, new technologies are considered as a path to reach out non-traditional learners of today: "Our eyes are being opened to extraordinary possibilities in the provision of education through ever expanding technological advance… New learning technologies must be eagerly embraced to cater for a far more diverse – and more discriminating – student body" (p.vii).

In 1991, Chickering and Gamson proposed seven characteristics of an effective learning environment with pedagogical focus. Technology, especially the Internet offers a rich and efficient system for educators to address these seven issues (Rither & Lemke, 2000). Ladyshewsky (2004), stressing the importance of "a clear and transparent pathway for the learner," illustrated the seven principles of Chickering and Erhmann as follows: (i) learner-teacher contact through email and bulletin boards, (ii) active learning through problem solving, inquiry and project-based tasks, (iii) person-to-person and within-group immediate feedback, (iv) communication of high expectations through explicit learning outcomes, (v) time-on-task through considering time constraints, (vi) embracing diverse talent and ways of learning through giving learners more freedom to control and explore, and (vii) collaboration among students through various collaboration techniques as peer learning and assessment (p.317).

The importance of pedagogical focus in electronic learning is well emphasized by Jasinski in 1998 (Quoted in Ladyshewsky, 2004):

> Technology does not cause learning. As an instructional medium, online technologies will not themselves improve or cause changes in learning. What improves learning is well-designed instruction. Online learning environments have many capabilities and the potential to widen options and opportunities available to teachers and learners. Technology is coming before pedagogy... at this stage of development, the effort put into exploring technologies to 'keep the cutting edge' is at the expense of equal investment in the underpinning of educational design (p.1).

2.4 ACCEPTANCE OF INNOVATION OR RESISTANCE TO CHANGE

> "People resist changes that appear to threaten basic securities. People resist proposed changes they do not understand. People resist being forced to change. Changes generated in one subculture where science and technology are highly valued, if they are to be accepted in another subculture, must be made understandable and given clear value."

Cuban (1986) quotes Edward Spicer, the anthropologist, extracting some statements after his studies on the impact of change upon varied cultures (p.108). Statements made by Spicer on the findings of his study conducted right after the World War II sound like today's clichés, similar to Niccolò Machiavelli's expression in The Prince on one of essential characteristics of mankind: "There is nothing more difficult to plan, more doubtful of success, nor more dangerous to manage than the creation of a new order of things."

Today, while the benefits of utilization of ICT for instructional purposes are plentiful (Education Week, 1997; Garner & Gillingham, 1996; Kulik & Kulik, 1991; McKinsey, 1995; Office of Technology Assessment, 1982, 1995; Wenglinsky, 1998), moderately few educators are making use of ICT in their teaching (McKinsey, 1995; Office of Technology Assessment, 1995). Although the number of researches indicating the increasing use of ICT by teaching staff is increasing recently, neither IT has become integrated in the teaching-learning process nor adoption and diffusion of ICT has been experienced as it has been intended (Geoghegan, 1994).

There are barriers to the integration of ICT, and these barriers prevent the adoption and diffusion of technology by higher education institutions, as well as other wide range of organizations. The adoption and diffusion issues have also been the subject of many researches for the last decades, most of which have been based on the Rogers' general diffusion of innovations theory (Burkman, 1987; Hall & Hord, 1987; Ely, 1999; Stokdill & Morehouse, 1992; Farquhar & Surry, 1994).

Adoption is a difficult process, requiring commitment, investment, and a well-focused strategy. Rogers (1995) quotes Walter Bagehot from his Physics and Politics in 1873:

> "One of the greatest pains to human nature is the pain of a new idea. It ... makes you think that after all, your favourite notions may be wrong, your firmest beliefs ill-founded... Naturally, therefore, common men hate a new idea, and are disposed more or less to ill-treat the original man who brings it" (p.335).

In order to facilitate the process for adoption, researchers are still trying to investigate the underlying factors of resistance and hesitance for ICT use by some teaching staff, despite some others' enthusiasm,

motivation and readiness (Jacobsen, 1998), and some are trying to propose models for adoption of technology (Zhao & Chico, 2001).

With regard to adoption of technologies, specifically of distance learning, in their studies on the perspectives of administrators, faculty and support units and their impact on the rate of distance education adoption, Dooley & Humphrey (2000) conclude that the rate of adoption of distance learning technologies can be enhanced through revised policies, procedures, and strategies.

2.4.1 Institutional Commitment: Administrative Attitude

Bates & Poole (2003) points out that educational technology "requires a relatively sophisticated organizational support structure," and "failure... is one of the major barriers to the effective use of technology in teaching" (p.7).

Institutional commitment is essential in realization of any innovation. It is also the case for web-based distance learning programs. McAlister, Rivera and Hallam considers web-based program as a representative of its institutions' personality: "..., in order for any web-based program to represent the institution well, care must be taken to craft programs that echo the institution's core values and competencies" (2001). This craftsmanship is of a team comprised of administrators at all levels as leaders, faculty members, and technical staff. It is this craftsmanship that will actively involve in the conception and planning processes, facilitating the consecutive process of implementation.

Sloman proposes that "training managers should identify the appropriate wins in their organisation rather than letting the availability of technology determine their agenda" (2001, p.77).

Bates describes decision making process about technology use (1995).

> Decision making about technology ... is a complex process, requiring consideration of a great number of factors. Decision making in this area is also about personal choice, driven as much by values and beliefs as by technical considerations. These different factors cannot easily be related to one another quantitatively. In the end, an intuitive decision has to be made, but based on a careful analysis of the situation.
>
> Fortunately, one of the greatest advantages of the human brain over computers is that the brain is far better than a computer at handling this kind of decision, provided that people have the necessary information and an appropriate framework for analysis and decision making. From this point, decision makers can then come to their own conclusions intuitively about the best mix and match of specific technologies to use, taking into account not only the factors enumerated, but also all the local conditions which only they can know fully. (Pp.59-60).

There is a considerable body of research investigating the perceptions and attitudes of teaching staff towards the instructional use of ICT. However, only very recently, they have started to provide recommendations for institutional or organizational practices. It is a clear fact that findings of such investigations have a lot to say for future ICT integration models to be considered by the educational institutions as a part of their educational/organization strategic plans. A careful strategic planning leading to achievement of clearly defined educational objectives is key for a successful technology adoption.

2.4.2 Role of Faculty

Dooley & Murphrey (2000) quote from Dillon & Walsh (1992), "the view of distance education as an innovation provides an important means for understanding the phenomena of distance education, particularly from the perspective of those upon whom its acceptance depends: the faculty."

Skolnik (1998) defines the source of resistance in Higher Education in the 21st century when he writes "Some reasons why change might be far more pervasive in the first decade of the 21st Century than in the last three decades of the 20th Century are the increasingly harsh economic environment of higher education, the increasing integration of higher education with the world of business and industry, and the widespread use of information technology. It is suggested that the only constituency from which there will be opposition to the scenarios depicted in the 21st Century higher education literature is faculty of colleges and universities" (p.635).

The changes and transformations in the teaching-learning process are emphasized by several researchers, new approaches of research are being applied to investigate exclusive issues in this area, and the amount of these studies are increasing day by day (Kulik & Kulik, 1980, 1991; Ehrmann, 1995; Riegeluth, 1989; Calvani & Rotta, 2000). In most of the cases, integration of ICT into teaching-learning process has also transformed the role of teachers from traditional "information-provider" to contemporary "coach" and "facilitator", and of students from being passive receivers of information to active participants in the learning process. In this context, Sherry and Gibson (2000) note "the required shift is far greater," quoting Carroll (2000).

Higher education institutions are in the business of education, and their primary resource is their faculty. In order to make the best use of scarce resources, both human and financial, they must ensure proper and up-to-the-point investment of those resources in such a way to support

professional development of the faculty and to provide best educational experience for the students (Barboni & Lucas). It is clear that investment in ICT cannot be fully effective, unless faculty becomes fully capable of using these technologies.

However, most research indicates, "teachers are more hesitant and less likely to embrace computer technology than other professionals" (Paprzycki & Vidakovic, 1994). Bower (2001) gives an example for the hesitancy of the faculty, quoting a Wall Street Journal reporter, John D. McKinnon, indicating that "even at Florida Gulf Coast University, a university 'built as a testing ground for Internet-based instruction' (1998, p.14c), faculty expressed serious concerns and reservations regarding the effectiveness of distance learning."

Findings of Marcinkiewicz (1993/1994) also show that, regardless of the number of computers available, teachers have usually underutilized them. Sherry and Morse, in their study on a needs assessment research project, have counted "becoming comfortable with the technology" among the content which should be included in distance education training courses, and has stated the "unfamiliarity with and fear of distance education technologies" as the single biggest problem in distance learning today (1995). Similarly, Calise and Maggi speak of the familiarization with technological instruments and communication programs as one of the most important problems (1999). U.S. Department of Education's National Centre for Statistics (1999) also attracts the attention to the fact that "almost two-thirds of all teachers feel they are not at all prepared or only somewhat prepared to use technology in their teaching (quoted by Web-Based Education Commission, 2000).

Before continuing with the reasons for under-utilization of ICT by faculty, it may be useful to listen Cuban (1986), while stating the roots of extraordinary changes in teaching-learning environments, saying, "Seldom were [these] innovations initiated by teachers." He quotes a poem, entitled 'Antiquated' written by a teacher in early 1920s upon the famous statements

of Thomas Edison as to the changing face of education. The poem reads as follows:

> Mr. Edison says
> That the radio will supplant the teacher
> Already one may learn languages by
> means of Victrola records
> The moving picture will visualize
> What the radio fails to get across.
> Teachers will be relegated to the backwoods,
> With fire-horses,
> And long-haired women;
> Or, perhaps shown in museums.
> Education will become a matter
> Of pressing the button.
>
> Perhaps I can get a position at the
> switchboard.

There are several reasons that have a say for poor use of ICT by faculty, including, but not limited to, lack of equipment, inadequate in-service or pre-service training, and compensation (Berg, 2000). Although there are such several factors influential in inadequate use of ICT among educators, attitudes have been considered as the most influential one (Francis, 1993). Considering the fact that positive attitude towards ICT may flourish their innovative and effective use for instructional purposes, perceptions and attitudes of towards information and communication technologies have become a major area for many researchers (Savenye, 1998). Gold speaks of a positive change in faculty's attitudes toward online instruction, seeing it as more participatory and interactive, after being exposed to a pedagogical in-service training course (2001). In this context,

Yildirim speaks of a significant correlation between level of computer competency and attitude (1997).

The follow-up study conducted by the NEA (Office of Higher Education, 2001) with 12 higher education faculty members to gain more insight to the opinions expressed in a telephone survey study conducted in March 2000 shows that concerns of the faculty members regarding distance learning gathered around such issues as reliability of technology, compensation, property rights and enrolment limits. The faculty members praise distance learning initiative for reaching out to more students' flexible learning and teaching, and greater interaction yet with concerns about lack of human contact. The instructors are aware of the fact that distance learning causes more work for themselves, but they also want it to be understood by students and administrators that it is the same for them.

2.4.3 What Do Learners Think?

Nowadays, primary and secondary education students are much more advantageous than post-secondary education students, for using information and communication technologies in learning environment; many of them do not have to *adapt* themselves since they start to have increasing access to these technologies compared to their seniors. However; post-secondary education students, especially non-traditional adult learners, may not be as comfortable with intensive use of computers and Internet as a learning tool due to their poor acquaintance with ICTs during their life experiences (Usun, 2003).

Difference between certain age groups in terms of learner attitudes to instructional use of computers and the Internet, with certain association with technology literacy, is only one aspect. Concept of 'digital divide' that has come to the fore as the use of information and communication technologies has expanded throughout higher education institutions is a lot to say.

Although US public school system is considered to be a platform to ensure equality between and among diverse groups of students, Postman (1999) perceives the introduction of technology into schools as a way to inequity indeed. Gladieux and Swail (1999), as well as Selwyn (1999) and others mention about the introduction of advanced information and communication technologies in schools has led to a disparity between advantages and disadvantages groups, particularly in having access to computers at home.

Slate, Manuel & Brinson's (2002) work focused on another dimension of the digital divide between majority and minority groups, revealing the viewpoints of the Hispanic college students on educational uses of the Internet. The study concluded no differences between first-generation and non-first-generation college students in their attitudes towards the Internet, but between those groups whose primary language spoken is English or Spanish.

Usun's (2003) survey study, conducted on the undergraduate students' attitudes towards the Internet use for educational purposes in Turkey, revealed that students preferred the Internet use especially for easier access to the training materials, and if given a choice they would prefer t take a course which required the Internet use.

2.5 POLICY ISSUES IN DISTANCE EDUCATION

Notwithstanding with various dimensions of distance learning, studies show that university administrations do not have a clear plan for a proper management and implementation of distance learning programs in their institutions (Bothel, 2001; Miller & Padgett, 1998). Bothel points out that "many distance education programs are being implemented with a vision that is not universally shared and goals that are not clearly understood" (Bothel, 2001).

Higher education institutions are in a process of shift to make use of new learning technologies; however, many institutions suffer from this transformation period due to the lack of effective planning and decision-making processes. Kirby (1998) considers planning as a vital element in achieving anticipated institutional and instructional objectives in the utilisation of distance education. It is clear that such a planning process aims at associating elements of an online learning programme with learner expectations in order to have effective results.

Policy-making and accordingly strategy development will lead to make basic decisions about the goals, and tools to achieve these goals. Khakhar (2001) regards strategic planning in parallel with set policies as a framework for achieving institutional change and development, particularly in resource allocation and management.

Clearly, implementation of a distance learning programme based on distinct policies set priorly is key to the success of that programme. Policy making and planning seem to be the most neglected areas of the process for integrating distance learning programme as an alternative way of instructional delivery. It was in 1990s, when distance education literature started to include studies on management and policy and strategy development in order for decision-makers to deal with ever-growing policy issues in distance education area. The first model to help decision-makers in dealing with policy issues in distance education was developed by Gellmann-Danley & Fetzner in 1998, who state that priorly made policy decision may lessen the seriousness of possible barriers and problems during implementation, and classify policy development areas for distance learning in seven groups:

Table 3 – Policy Development Areas for Distance Learning by Gellmann-Danley & Fetzner (1998)

Policy Development Area	Key Issues
1) Academic	Academic calendar, course integrity, transferability, transcripts, evaluation process, admission standards, curriculum approval process, accreditation
2) Fiscal	Tuition rate, technology fee, FTE's, consortia contracts, state fiscal regulations
3) Geographic	Service Area Regional limitations, local versus out-of-state tuition, consortia agreements
4) Governance	Single versus multiple board oversight, staffing, existing structure versus shadow colleges or enclaves
5) Labour-Management	Compensation and workload, development incentives, intellectual property, faculty training, congruence with existing union contracts
6) Legal	Fair use, copyright, faculty, student and institutional liability
7) Student Support Services	Advisement, counselling, library access, materials delivery, student training, test proctoring

Berge (1998) adapted Gellmann-Danley & Fetzner's model, and added two more areas to it: technical and cultural.

Table 4 – Policy Analysis Framework for Distance Education by Berge (1998)

Policy Area	Key Issues
Academic	Calendar, Course integrity, Transferability, Transcripts, Student/Course evaluation, Admission standards, Curriculum/Course approval, Accreditation, Class cancellations , Course/Program/Degree availability, Recruiting/Marketing
Governance Administration Fiscal	Tuition rate, Technology fee, FTE's, Administration cost, State fiscal regulations, Tuition disbursement, Space, Single versus multiple board oversight, Staffing
Faculty	Compensation and workload, Development incentives, Faculty training, Congruence with existing union contracts, Class monitoring, Faculty support, Faculty evaluation
Legal	Intellectual property, Faculty, Student and institutional liability
Student Support Services	Advisement, Counselling, Library access, Materials delivery, Student training, Test proctoring, Videotaping, Computer accounts, Registration, Financial aid, Labs
Technical	Systems reliability, Connectivity/access, Hardware/software, Setup concerns, Infrastructure, Technical support (staffing), Scheduling, Costs
Cultural	Adoption of innovations, Acceptance of on-line/distance teaching, Understanding of distance education (what works at a distance), Organizational values

King, Nugent, Russell, Eich & Lacy (1999) worked on Gellmann-Danley and Fetzner's and Berge's models, and simplified these models in a three-tiered policy analysis framework. Their simplified framework aimed at providing "decision maker an expeditious way to think about the major issues of faculty, student support, and management of the educational process and the wide array of technological issues."

Table 5 – Three Tiered Policy Analysis Framework for Distance Education by King, Nugent, Russell, Eich & Lacy (1999)

Policy Area	Description
Faculty (including Continuing Education and Cooperative Extension)	Rewards (e.g., stipends, promotion and tenure, merit increases, etc.); Support (e.g., student help, technical assistance, training, etc.); Opportunities to learn about technology and new applications (e.g., release time, training, etc.); Intellectual property (e.g. ownership of materials, copyright, etc.)
Students/ Participants	Support (e.g., access to technology, library resources, registration, advising, financial aid, etc.); Requirements and records (e.g., residency requirements, acceptance of courses from other places, transfer of credit, continuing education, etc.)
Management and Organization	Tuition and fee structure; Funding formula; Collaboration (e.g., with other Departments, units, institutions, consortia, intra-and inter-institutional, service areas, etc.); Resources (e.g., financial resources to support distance education, equipment, new technologies, etc.); Curricula/individual courses (e.g., delivery modes, course/program selection, plans to develop, individual sequences, course development, entire program delivery, interactivity requirements, test requirements, contact hour definitions, etc.)

All three models intend to reveal possible problem areas in policy making for distance education initiative, and to forewarn decision-makers for preparing relevant answers to these problems.

Besides these models, some project-based studies were also conducted towards policy analysis for distance education. One of them was developed as a result of European Union supported Socrates Programme on Open Distance Learning. It was a policy framework based on three aspects: educational frame, pedagogical frame, organizational content (Khakhar & Quichmayer, 1999).

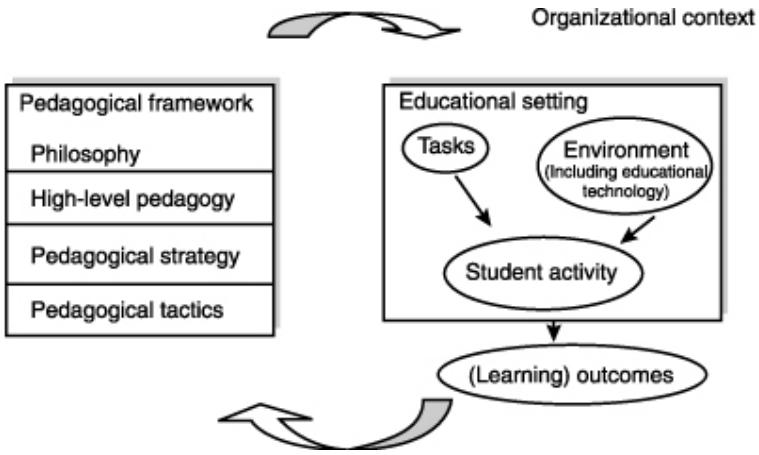


Figure 4– Policy Framework by Khakhar (1999)

Another framework was provided by Michele D. Bunn in 2001, regarding three main decision areas (learner, organizational, and instructional) within four phases of programme development, namely planning, development, implementation, control.

A well-defined planning process is vital for an institution to respond to changing educational needs of the target audience, and to adapt itself to ongoing developments in instructional technology. Such a planning will enable the institution to implement the policies made, and to achieve the goals stated through well-established strategies. Thus, it is important for an institution, which intends to employ distance learning techniques to offer courses or programmes, that it embraces its policies and strategies based on a strategic plan.

Khakhar (2001) puts forward three basic questions for managers to answer in strategic planning:

- Where are we now?
- Where do we want to be in a given number of years?
- How do we get there from here?

A thorough consideration of external and internal factors is critical in answering these questions. Khakhar (2001) warns managers in that they should be aware of their institutions' strengths and weaknesses, as well as "social, economic, geographic, educational and political environment of their institution" in order to answer them as needed.

In 1996, Moore and Kearsley listed procedures in a strategic planning process in their *Distance Education: A Systems View* as follows:

- Formulating a vision and a mission, goals, and objectives for the institution or program
- Balancing aspirations with currently available resources and choosing among options so that the priority goals can be achieved with high quality and with the available resources
- Assessment of changes in student, business, or societal demands
- Tracking emerging technological alternatives
- Protecting future resource and financial needs.

Formulation of a mission, as presented as the first item by Moore and Kearsley above, is an action to be taken by top managers and is the basis of a sound strategic planning and an effective implementation. Mission of an institution clarify the target audience, how that audience will be served, and why they will be served; whereas vision, as Fritz (1989) defines, a scenario reflecting what we will be doing in the future. A vision will include a comprehensive set of goals and objectives to have opportunities operate in the institution. A vision shows the picture of an institution, after having succeeded in achieving all its goals and objectives. Overall, strategic planning is preparing an institution itself for future activities.

Besides Moore and Kearsley in 1996, strategic planning in distance education literature is brought to the foreground through studies of Ford (1996), Daniel (1996), Olcott (1996), Hache (1998), and Bates (2000).

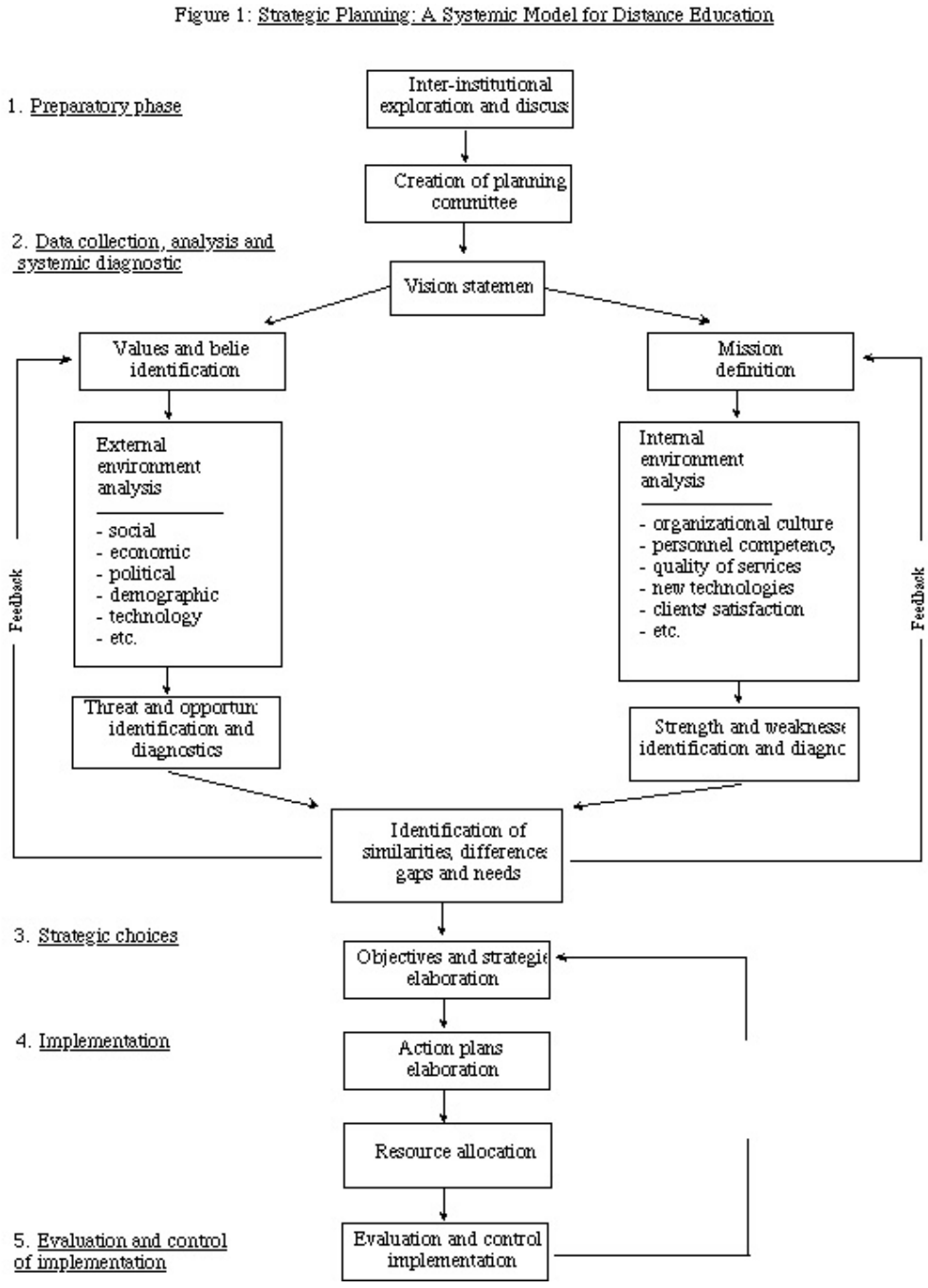


Figure 5 – Strategic Planning: A Systemic Model for Distance Education by Hache (1998)

Hache's strategic planning model (1998), adapting general strategic planning process to specific requirements of distance education, consists of five phases: "(1) the preparatory steps to planning, (2) the gathering of information, analysis and systemic diagnosis, (3) the strategic choice, (4) the implementation, and (5) the evaluation and control of the implementation."

Ford (1996) suggested that the starting point for the development of an educational technology plan is to examine the overall strategic plan of the institution and how its objectives are currently being met. He was critical; however, that many institutional plans are too broad and therefore had no real meaning in driving the direction of organizational change. For example, a strategic plan that stated, "to be at the leading edge of teaching and learning," does not provide any steps or objectives to accomplish.

Thus, a strategic plan for educational technology should refer to both the technological infrastructure and the manner that educational technology will be adopted in the teaching and learning environment in a proper manner (Bates, 2000, p. 46). Bates also emphasizes the importance of having a technology plan, to serve as a guideline in the utilisation of technology, within the institution-wide strategy plan developed.

An educational institution is to determine its status and its objectives before selecting its technology. Selection of media and technology is crucial, and there are several models for it. Bates developed and revised a framework for selecting and applying technology based on the following characteristics (Bates & Poole, 2003, p.77): (i) being able to work in different learning contexts, (ii) allowing decision-taking both at administrative and at instructional levels, (iii) giving equal consideration for operational and instructional issues, (iv) involving proper comparison of various media and technologies in order to allow for a well-balanced mix for any context, (v) being easy-to-understand and –to-practice; (vi) being cost-effective, and (vii) being able to embrace new technologies when required.

Bates' first model, which was developed in 1988 and revised in 1995, was developed as a set of questions to be answered by administrators before making decisions about selecting and applying technology for instructional purposes. The model is called ACTIONS; A standing for access, C standing for costs, T standing for teaching and learning, I standing for interactivity and user-friendliness, O standing for organizational issues, N standing for novelty, and S standing for speed (2003, p.77).

ACTIONS model was then transformed into SECTIONS model by Bates, where Access is contained under students, a new item in the model, and ease-of-use and reliability are added as well.

In the new model, S stands for students, under which access, demographics, student characteristics are gathered. E is for ease-of-use, which is comprised of computer and information literacy, orientation, interface design and reliability in itself. C stands for costs including sub-items of expenditure and drivers of costs. T is for teaching and learning, comprising of epistemology, selection of technology, content and skills, and student assessment strategies. I stands for interaction and interactivity, O for organizational issues, N for novelty, and S for speed (pp.77-105).

Bates' model or such similar frameworks serve as a roadmap to administrators in selecting and applying the most appropriate media and technologies for learning environments. Recent years have witnessed several studies concluding the importance of having a well-designed strategy plan for appropriate integration of technology in education, along with recommendations to administrators to do so.

In *Educational Technology Planning*, Bruce (1999) indicated that a strategic plan should be in parallel with the institutional mission and vision, as well as institutional identity, culture, and values. His recommendation for institutions emphasizes (i) communication and advisory processes, (b) professional development, (c) technical and instructional support, (d) distributed learning, (e) regional provision of services, (f) technological

constituents, and (g) copyright and intellectual property issues along with protection of privacy.

Rossner and Stockley (1997) also provided several issues for successful implementation of a strategic plan focusing on educational technology; including top-level administrative support, adequate technical infrastructure, electronic library, online registration, easy access to the system, research, active involvement of faculty and technical staff, continuous training and support for students and instructors, and financial support.

To what extent these models, frameworks and recommendations have been applied by institutions? Stockley's (2004) study examined online strategic plans in Canada, based on a checklist called the Schedule of Principles for Strategic Planning for Educational Technology, which was created in view of the common issues mentioned in those guidelines and recommendations for development of strategic plans in the literature. As a result of the study, it has been indicated that issues as to course development or management were mentioned most often in the strategic plans. Interestingly, pedagogical support and lifelong learning were the least mentioned issues. Another important result of the study has been that many components that are considered important by the literature review are not cited in any of the plans examined; namely intellectual property, teaching effectiveness as a parameter for tenure and promotion, and system security.

Besides, many studies have been started recently to propose models for effective use of information and communication technologies in education taking into consideration the country-specific characteristics.

Grant & France's (2000) study to propose a model for virtual classrooms is particularly developed for developing Caribbean countries. They concluded that recent developments in technology and wide range of uses of the Internet could be used by the developing countries to enhance offering of high quality educational opportunities for their citizens.

Özgen, Maraşlı and Yalçın proposed a model for Internet-based distance education in Turkey in 1996. Their model was specifically towards for those individuals having difficulty in time and place flexibility in order to provide them with education opportunities through Internet-Mediated Distance Education.

İşman also proposed an e-university model having eight major components: web, testing and evaluation, instructional design, project management, information processing, e-library, student affairs, public relations.

Especially in the last two decades, studies provided educational organizations with valuable information in order to facilitate the transformation period they need to respond to the educational needs of the society through distance education, benefiting instructional, economic, systematic vantages of it to the maximum. It is very important for the organizations to experience a structural change based on a well-developed strategic plan, adopting the change in its own unity, mission, and vision (Girginer, 2002; Bothel, 2001).

2.6 HIGHER EDUCATION IN TURKEY

2.6.1 History of Higher Education in Turkey[1]

Although history of Turkish higher education dates back to the Nizamiye Madrasa, founded by Seljuk Turks in Baghdad in the 11th century, first deterrent example of Western type of higher education institution was the Imperial Naval Engineering College (*Mühendishane-i Bahri-i Hümayun*), founded in 1773. Afterwards, the Imperial Military Engineering College (*Mühendishane-i Berri-i Hümayun*) was opened in 1795. These two

1 This section is based on information provided by the Turkish Higher Education Council (Yükseköğretim Kurulu) at http://www.yok.gov.tr/english/index_en.htm.

institutions are considered to represent the first deviation from the traditional system of the madrasas. They were subsequently followed by the Imperial Medical College (*Tıbbiye*) in 1827 and the Imperial Military College (*Harbiye*) in 1834.

Towards the end of the 19th century, several higher education institutions were opened under the French influence; including, the School of Public Administration (1877), the School of Law (1878), the Higher School of Commerce (*Ticaret Mekteb-i Alisi*, 1882), and the Imperial School of Fine Arts (*Mekteb-i Sanayi-i Nefise-i Şahane*, 1882). In 1909, the naval and military engineering colleges were merged as the Higher School of Engineers (*Mühendis Mekteb-i Alisi*). These institutions were the roots of today's well-known Turkish universities, such as İstanbul Technical University, Marmara University, Mimar Sinan University, and Yıldız Technical University.

Robert College was the first Anglo-American type of higher education institution in Turkey. It was founded in İstanbul in 1863 as a typical liberal arts college, and engineering departments were added to this institution in 1912.

Historical records marks the proclamation of the Gülhane Imperial Edict in 1839, "an official declaration of will by the Ottoman Empire to modernize," to make a decision to establish a European type of university. After seventeen years of preparation, the *Darülfünun* (House of Sciences) was introduced. However, it was 1900 that the *Darülfünun* was firmly established with the name of *Dar'ül-fünuni Osmani* (Ottoman House of Sciences) after several problems were experienced due to social resistance mainly from madrasas.

Proclamation of the Turkish Republic in 1923 led to abolishment of madrasas and other religious training institution. The government's efforts to restructure the higher education system were grounded on Professor Albert Malche's report on Turkish university reform. Following this report,

the *Darülfünun* was replaced with İstanbul University in 1933. In 1944, the Higher School of Engineers was also reorganized to become Istanbul Technical University.

In the meantime, several independent schools were established in Ankara, new capital of country, including the School of Law (1925), Gazi Institute of Education (1926), the Agricultural Institute (1930), the Faculty of Languages, History and Geography (1937), the Faculty of Science (1943) and the Faculty of Medicine (1945). These institutions were then formed Ankara University in 1946.

1950s witnessed a significant change in the predilection of the Turkish university from continental European to American model, which was considered to better meet "the manpower requirements of the growing market economy."

Accordingly, four new universities were established in scattered settlements of the country as campuses: Karadeniz Technical University in the northeast in 1955, Ege University on the Aegean coast in 1955, Middle East Technical University (METU) in Ankara in 1956, and Atatürk University in the east in 1957.

With the new constitution prepared in 1960, university autonomy was defined with the right of faculty members to elect rectors and deans, except METU with its special status "with a lay board of trustees who appointed the president of the university."

Hacettepe Faculty of Medicine, which affiliated with Ankara University until then, was converted into Hacettepe University in 1967, and in 1971, Robert College was renamed Boğaziçi University.

As mentioned above, several professional schools established towards the end of the 19th century were reorganized, and similar institutions were established in various provinces of the country. These schools were renamed *state academies* in 1969: "state academies of fine

arts, state academies of engineering and architecture, and state academies of economic and administrative sciences."

Subsequent years were a witness of establishment of several universities, and representation of a wide geographic distribution throughout the country.

In view of such a rapidly expanding system and an increasing number of applicants, 1974 marked the establishment of the Student Selection and Placement Centre "to prepare, organize and administer a central university entrance examination at various locations throughout the country."

In order to respond to the ever-increasing demand for higher education, "distance education by correspondence was started in 1974, along with the establishment of two-year vocational schools affiliated with the various ministries, mainly with the Ministry of National Education."

1981 Constitution of the Republic allowed for new conditions for Turkish higher education. Most important of these was the re-establishment of the Council of Higher Education "as a constitutional body, to steer important activities of higher education institutions, i.e., planning, organization, governance, instruction and research." Second important issue was the opportunity given to non-profit foundations to establish higher education institutions. The new higher education law went into effect in 1981.

> One significant aspect of this restructuring was the elimination of institutional and functional fragmentation in the system. State academies were merged to form new universities, all vocational schools and conservatories were affiliated with universities, and teachers' colleges were converted into faculties of education under various universities. In other words, higher education was completely unified under the Council of Higher Education without any room for possible governmental intervention.

With the new law, the first private university, Bilkent University, was founded in 1984. With newly established 27 universities established between 1992-1994, higher education services were almost every corner of the country. Since 1994, the number of universities has increased to respond to the ever-growing needs of the society in view of recent developments being experienced.

2.6.2 Structure of Turkish Higher Education System

Higher education system in Turkey is defined to cover all post-secondary programs with duration of at least two years. The system consists of universities and non-university institutions of higher education (police and military academies and colleges).

Article 3 of the Higher Education Law No.2547 defines higher education as "all post-secondary education consisting of at least four semesters, within the national education system, at every stage"2. Same article specifies types of higher education in the Turkish context as follows: (1) Formal programs requiring attendance during the entire course of education; (2) Distance education conducted by means of radio, television, and other educational materials; (3) External education programs offering courses in non-working hours where attendance is not compulsory, but midterm and final examinations are; and (4) Non-formal training programs offered to the general public with the aim of enabling the acquisition of skills in various areas.

Admission to higher education is centralized and held through an examination administered every year on national scale by the Student Selection and Placement Centre (OSYM), established in 1973 and affiliated with the Council of Higher Education in 1981.

A two-tier system is there within the Turkish higher education structure, including undergraduate and graduate levels, except for Dentistry, Medicine and Veterinary Medicine programmes having a one-tier system.

[2] http://www.yok.gov.tr/english/law/art3.html

General Structure of the Turkish Education System

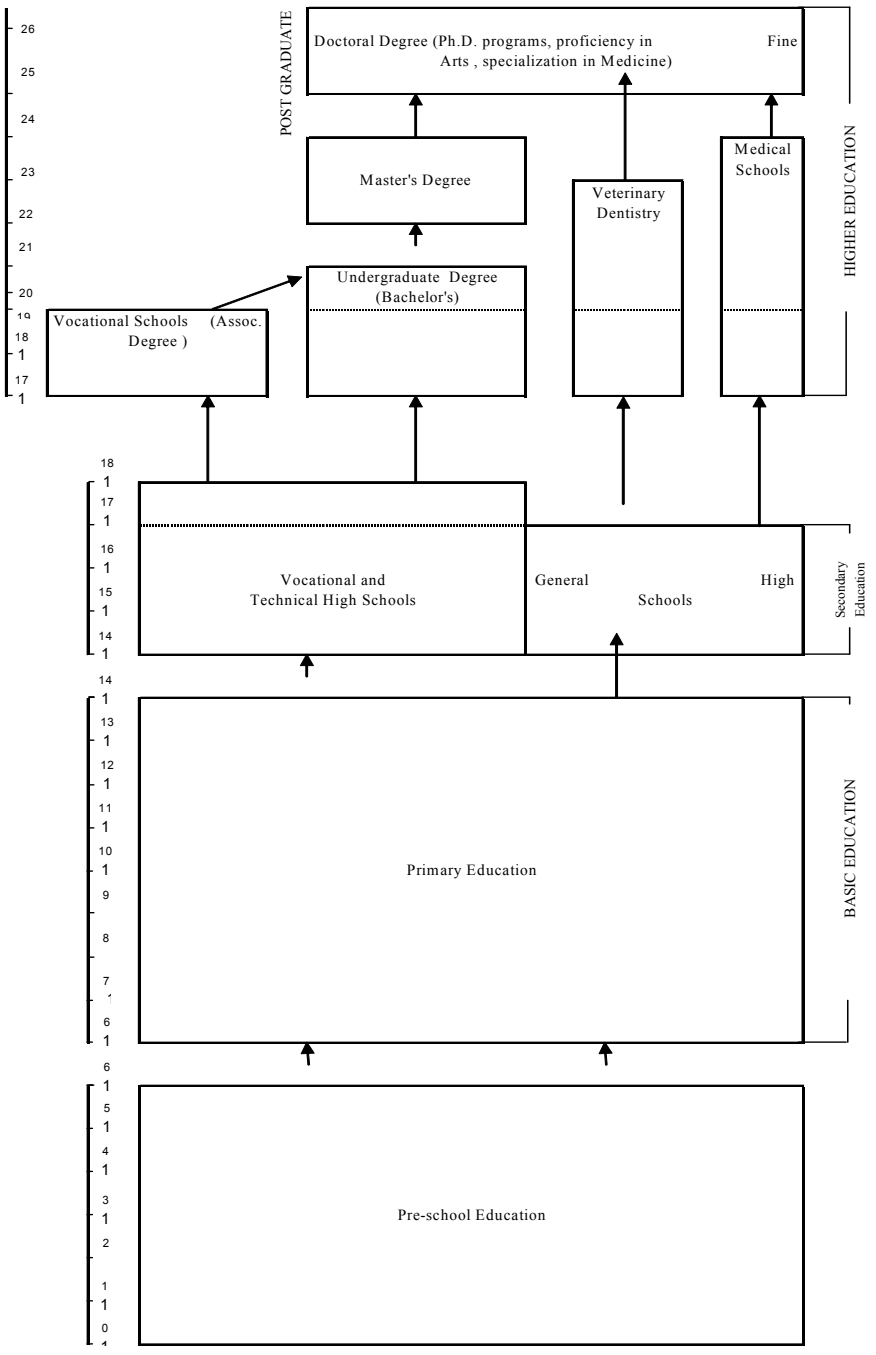


Figure 6 – General Structure of the Turkish Higher Education System[3]

[3] Adapted from the table at http://www.yok.gov.tr/webeng/tabloins.xls.

Each university consists of faculties and four-year schools offering bachelor's level programs and two-year vocational schools offering pre-bachelor's (associate's) level programs. Four- and two-year schools serve with a vocational emphasis. The duration of Veterinary Medicine and Dentistry programmes is five years, whereas of Medicine is six years.

Graduate level consists of the Master's Degree and the Doctorate Degree. For Master's Degree, there are two types of programmes: with thesis and without thesis.

Universities, faculties, institutes and four-year schools are founded by the law, whereas two-year vocational schools, as well as departments and divisions, are by the decision of the Council of Higher Education, alike is opening of a degree programme at any level.

The number of students to be admitted for Bachelor's and Associate's degrees is determined yearly by the Council of Higher Education, in parallel with the recommendations of the universities, whereas universities decide upon the number of students and admission requirements for graduate level.

2.6.3 Turkish Higher Education with Figures[4]

Due to high number of primary and secondary education age group, every year approximately 1.5 million candidates take the university entrance examination in order to be placed in an undergraduate or associate's degree programme offered by the Turkish universities.

4 This section is based on information provided by the Turkish Higher Education Council at http://www.yok.gov.tr/english/index_en.htm, and by the Ministry of National Education at http://apk.meb.gov.tr/yayinlar/2004-2005%20Milli%20Eğitim%20Sayısal%20Verileri.zip.

In 2004, a total of 1,897,196 candidates took the university entrance examination held by the OSYM; 574,464 of whom (30.3 percent) were placed in a programme. The dissemination of the applicants as of their educational background is shown in Figure-7:

As seen, merely 30.3 percent of the applicants were placed in a higher education programme, almost half of whom are those secondary education graduates that took the examination before at least once. They are followed by recent secondary education graduates of 2004. 62.1 percent of the students are placed in a formal education programme, whereas the remaining 37.9 percent in a distance education programme.

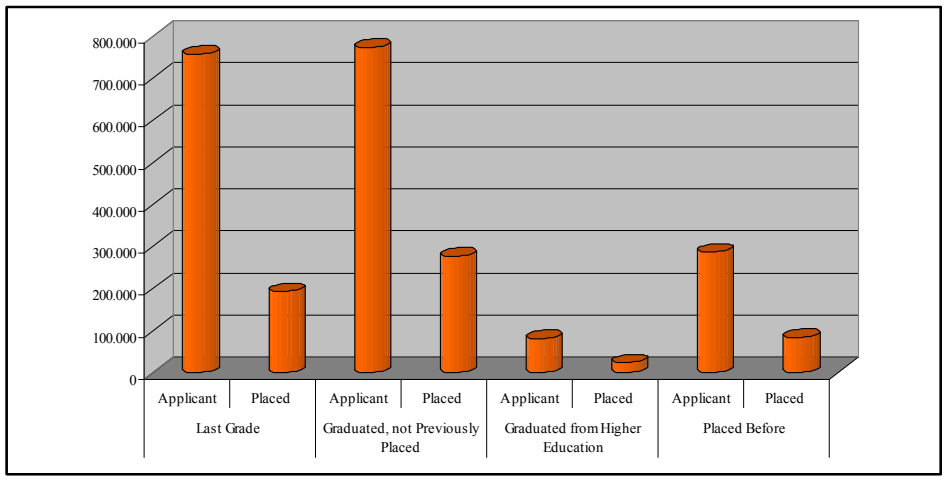


Figure 7 – Dissemination of Higher Education Applicants as of Educational Background

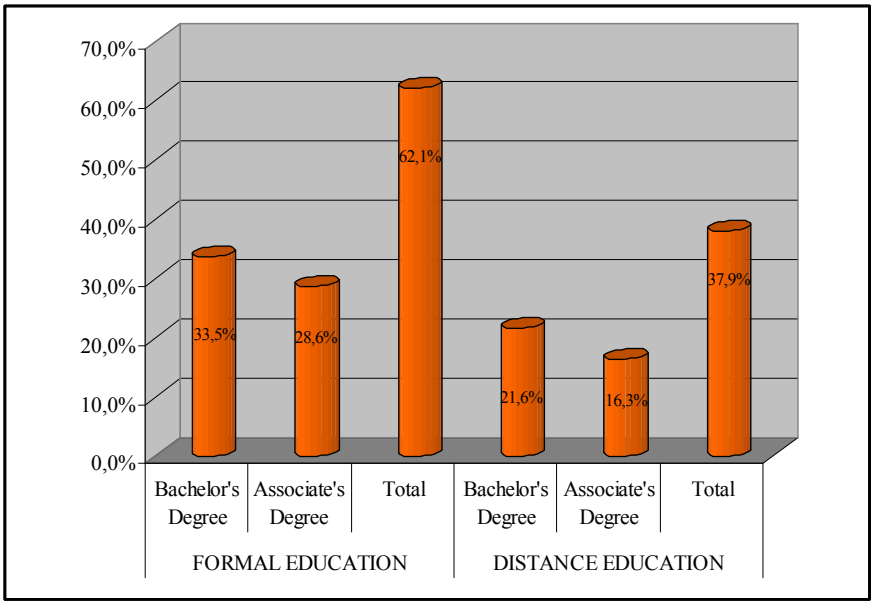


Figure 8 – Dissemination of Placed Applicants as of Type of Education

Along with 2004 entrees, today, a total of 1,930,581 undergraduate students are being trained on various fields in 77 higher education institutions; 24 of which are private non-profit universities.

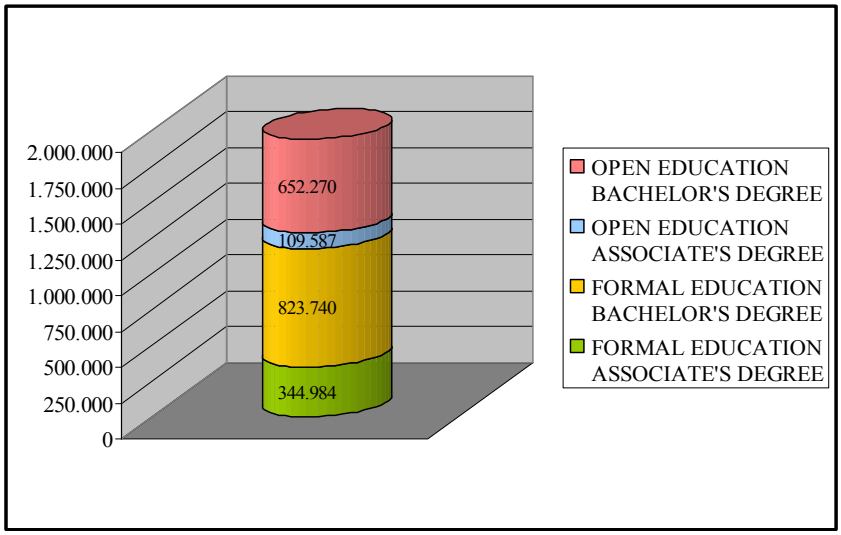


Figure 9 – Dissemination of Undergraduate Students in Turkey

Four percent of total undergraduate students attend to a private non-profit university.

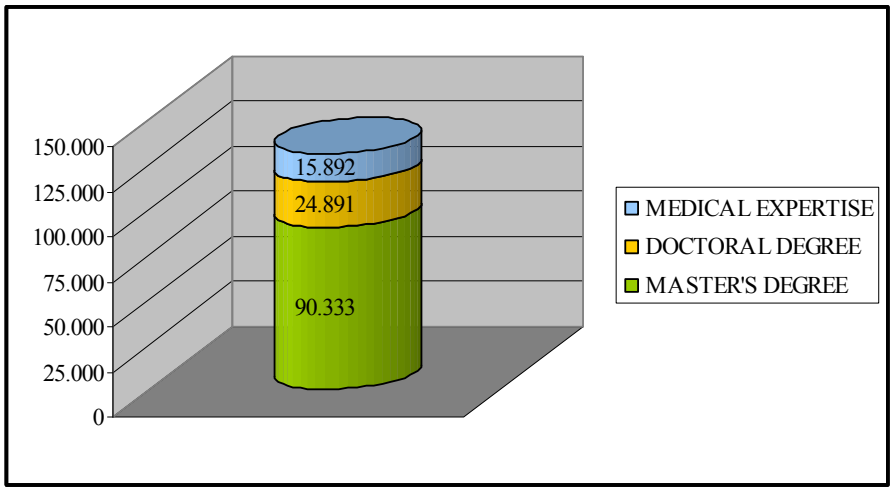


Figure 10 – Dissemination of Graduate Students in Turkey

Number of graduate students has marked a significant increase from 15.759 in 1983 to 131.116 in 2004.

The Council of Higher Education indicates the schooling rate in higher education, both on-campus and off-campus, as 35.3 percent in 2004, with a 5.6 percent increase since the year 2000. Addition of graduate students leads to a total higher education schooling rate of 37.9 percent, which was 31.7 percent in the year 2000.

Currently, there are total 77,065 faculty members in Turkey, 1,739 of who are working for other institutions than universities. 815 faculty members are of foreign nationality.

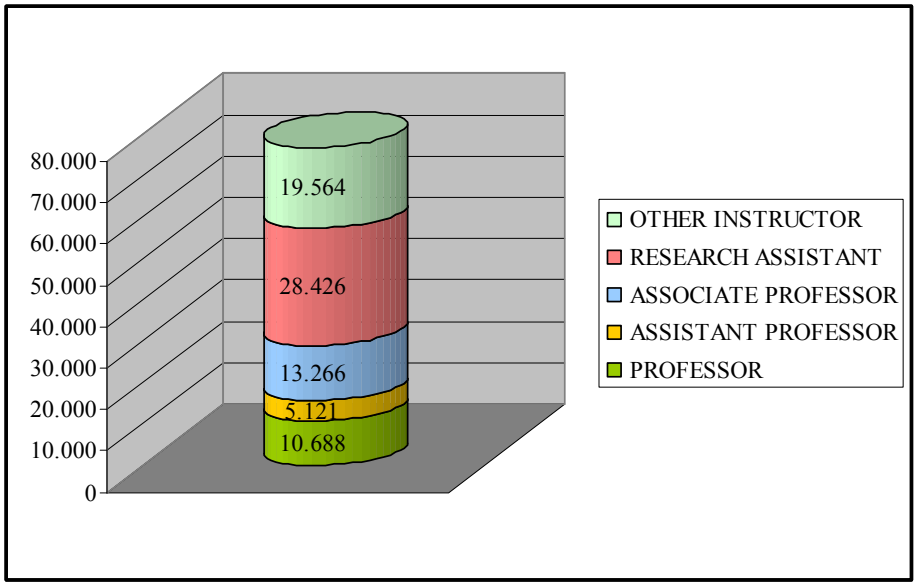


Figure 11 – Dissemination of Faculty Members as of Positions and Titles

The number of undergraduate students has shown a 2.3 percent increase from 2002-2003 academic year to 2003-2004 academic year; whereas number of tenure faculty members increased by 5.2 percent and number of research assistants and other instructors by four percent. Thus, number of on-campus undergraduate students per faculty member decreased to 31 in the year 2004 in Turkey.

Age population of higher education in Turkey is 5.2 million in 2004 (DİE, 2004). Accordingly, total schooling rate for higher education in Turkey is 35.3 percent, whereas 22.4 percent for formal education. Including the number of graduate students, total schooling rate rises up to 37.9 percent, whereas formal education to 25 percent.

2.6.4 Administrative Structure

Article 6 of the Law on Higher Education No. 2547, enacted in 1981, authorizes the Council of Higher Education, "an autonomous body with juristic personality which governs all higher education, directs the activities of the institutions of higher education, within the context of duties and powers given by this law."

The Council is comprised of 21 member, and its President is directly appointed by the President of the Republic of Turkey from among the Council members. The Executive Board performs day-to-day tasks of the Council. The Interuniversity Council, comprised of the rectors of all universities and a member elected by the senate of each university, serves as an academic advisory body. Besides relevant units responsible for research and planning, evaluation, financial affairs, and coordination, the Student Selection and Placement Centre being responsible for university entrance examination is also affiliated to the Council.

The Council of Higher Education develops short- and long-term plans to allow for establishment and improvement of higher education institutions, and for in-country and overseas training of faculty members; and monitors the progress. It is also responsible for effective coordination and cooperation between and among the higher education institutions.

The higher education is represented in the Parliament by the Minister of National Education.

2.6.5 Financial Arrangements

Preparation of annual budgets, procurement, and auditing are three important issues, which have autonomous higher education institutions been affiliated to the state.

Article 55 of the Higher Education Law No.2547 lists "sources of income of governing bodies of higher education, higher education institutions and the units attached to them" as follows:

a. annual budgetary allocations,
b. aids from institutions,
c. fees and payments received,
d. income from publications and sales,
e. income from movable and immovable property,
f. profits from the enterprises of the revolving fund,
g. donations, bequests and sundry.

Private universities shall benefit from these financial provisions and exemptions specified in the Law, and are exempted from real estate tax.

Oğuz (2004) lists the main sources of revenue for higher education institutions as follows: (i) allocations from the government budget; (ii) revenues from investments, aids, donations; (iii) services provided in return for a charge; and (iv) student fees. Allocations from the government budget constitute the main share among all sources.

With reference to the budgetary allocation for higher education, share of the budget allocated for higher education in consolidated budget is 2.6 percent, and in GNP is 0.93 percent. This allocation is disseminated to the state universities through added budgets by the Parliament and the Council for Higher Education.

In addition to this, a university has three more sources of income. First, revolving funds collect revenues from the services provided by universities such as patient care in university hospitals or contract research. Second, student contributions towards highly subsidized services are collected in a separate fund. Third, "each university has a research fund made up of a lump sum grant from the state-provided budget plus a portion of the income from the revolving fund and from earmarked projects given by the State Planning Organization".

The Higher Education Council states that "Only 27 % of the income from student contributions was spent for education, the rest going to very highly subsidized meals, lodging and medical services provided to the students, and to financing extracurricular activities."

2.6.6 Technical and Technological Infrastructure

The Internet's first entree in Turkey was contributed by a project of TÜBİTAK-METU in 1991. After an intensive preparation process, the Internet was introduced for public use in Turkey by April 1993.

Although Turkey is the 51st country, her place rose up to 30th place as of information traffic. TÜBİTAK-METU cooperation, providing Internet access to universities, private sector and individuals for the first time, had a significant influence on Internet use in Turkey.

In parallel with the rapid progress being experienced both internationally and nationwide, National Academic Network and Information Centre (ULAKBİM) was established in 1996, within the body of TÜBİTAK, in order to respond to a need of reorganization of management of information technologies. ULAKBİM, since its formation, has taken many steps towards the provision of technology and information to the users.

UlakNet was started in 1997 to link universities and research centres through a national network structure. UlakNet was strengthened gradually and progressively; and after completion of preparatory activities by universities and the Turkish Telecom, the new UlakNet backbone was become effective to connect to the GEANT with 155 Mbps symmetric capacity, to increase global Internet pass up to 465 Mbps, to increase bandwidth of backbone capacity up to 155 Mbps, to improve universities' and research centres' access to UlakNet by 75 times, and to reach approximately 500 thousand users.

Planning and activities are on-going for UlakNet's effectively serving to academic research objectives such as education, scientific research, technical progress, technology transfer, and expansion of scientific, technical and cultural knowledge.

2.6.7 Distance Higher Education in Turkey

Following the proclamation of the Turkish Republic, need for a well-organized and effective education system was at the peak to be transformed into a national, secular, and democratic state. In order to reach all segments of the society in the shortest period of time possible, "distance education" was considered to be a priority among other alternatives.

İşman (1998) examines evolution of distance education in Turkish education system in four phases: (i) Conceptualisation Phase (1927-1955), (ii) Correspondence Education Phase (1956-1981), (iii) establishment of Anadolu University and its activities, and (iv) recent developments experienced with latest communication technologies.

Odabaşı & Kaya (1998) also mark the years 1927-1955 as times when distance education was discussed as a concept. These years witnessed Dewey's proposing distance education method for teacher training

activities, which are the sole aim for nationwide literacy. Low literacy rates made it impossible to think of correspondence education until 1950s.

The first initiative for distance education was the establishment of the Correspondence Education Centre (*Mektupla Öğretim Merkezi*) in 1958 by the Ministry of National Education. The Centre aimed to provide opportunity for mass distance education towards formal and non-formal education at various subject areas and levels.

This was accompanied by establishment of a committee for education technology strategy and methodology, functions of which were determined to develop a contemporary distance education system through encouraging multimedia use for education and creation of new technologies and resources (Alkan, 1987).

Teacher Training Pilot College (*Deneme Yüksek Öğretmen Okulu*) was also an innovative initiative employing distance education methods in contemporary sense. However, this project was not successful as anticipated, and students are transferred to other formal education institutions (Odabaşı & Kaya, 1998).

Another body, Non-Formal Higher Education Institution (*Yaygın Yüksek Öğretim Kurumu-YAYKUR*), aimed at providing secondary education graduates with education opportunities through means of contemporary instructional technologies in order to create mid-level manpower through two-year higher education.

It was in 1981 that responsibility of distance higher education was given to the universities with the law. In 1982, the Faculty of Open Education of Anadolu University in Eskişehir was established and given the responsibility of implementing distance education programs. The Faculty of Open Education, the first institution to provide higher education through distance education technologies in Turkey, started with Economics and Business Administration programmes, and has continuously made additions to the number of programmes offered in parallel with the needs. Students of

open education continue their educational life through textbooks, TV- and radio-broadcast programs, with strong counselling services by the Faculty. Anadolu University is now considered one of the ten mega universities of the world in terms of distance learning services it is offering (Özkul, 2001).

Anadolu University has started its "Second University" project in 2001, with the aim of enabling students to study in another field and improve their qualifications. The project enable undergraduate students currently enrolled in higher education programmes, other than distance education programmes, as well as associate's or bachelor's degree holders apply to any one of the distance education programmes of the University, without taking the national university entrance examination. Within the framework of the project, current number of enrolment in various distance learning programmes of the university is 33,500.

As regards new learning technologies, the Middle East Technical University took the first initiative in 1996-1997 academic year for commencement of two online certificate programmes. One of these programmes, called IDEA, was started in 1998 to provide training to everyone interested on the subject of Information Technologies. The other programme was developed uniquely for the faculty, and faculty working for more than 30 Turkish universities received training on information and instructional technologies in 1999.

Serious other efforts have also been started by other universities. For example, videoconferencing system was established and put into use by the Bilkent University in 1996 and the İstanbul University in 2000. As well, Fırat University started to use distance education tools by its own Fırat TV programmes, Sakarya University started to design online training programmes and went for online certificate programmes. Istanbul Technical University established remote classrooms to connect its two campuses located at two different areas of İstanbul via microwave link. Besides all these studies, the Internet has become an integrated part of daily life in most of the universities.

However, an important benchmark with regard to the distance education initiatives in Turkey was the issuance of the Regulation for Inter-University Communication and Information Technology Based Distance Higher Education by the Council of Higher Education in 1999. The aim of the regulation was to facilitate academic cooperation through sharing of instructional facilities of universities, to improve effectiveness of education through interactive media, multimedia and limitless access to information, and to expand higher education to new masses. It also aimed at ensuring quality of technology-based programmes to be opened.

National Committee of Informatics was established to plan and coordinate the aforementioned activities in 2000, comprised of representatives from faculty members, Turkish Telecom, and National Academic Network and Information Centre (*ULAKBİM*) of the Turkish Institute for Scientific and Technical Research (*TÜBİTAK*).

Started its activities in 2000, the Committee immediately reviewed and recommended the Council of Higher Education to approve three main projects, two of which were the subjects of this study: e-MBA Project of Istanbul Bilgi University, and Informatics Online Master of Science Project of Middle East Technical University (*METU*). Since then, the Committee has continued to review, guide and approve many courses and certificate programs offered through distance education techniques by several universities.

Another significant event has been the establishment of cooperation between Turkish universities and the State University of New York (*SUNY*) for implementation of joint undergraduate programs. Within this framework, some part of the jointly developed programs is to be implemented by the SUNY, some by relevant Turkish universities, and some through distance education technologies. This cooperation has also included the third subject of this study, the e-MBA program offered by Anadolu University.

Anadolu University, then, opened an e-Accommodation programme providing Masters' Degree in accommodation management in the area of tourism in 2004-2005 academic year. This non-thesis masters' degree programme is also meant to make e of distance education technologies.

The second Masters' Degree programme opened by Anadolu University in 2004-2005 academic year is for Education of the Children with Developmental Impairment, which is implemented through the Internet technologies except for one course in the scientific preparatory grade. That course is given in the premises of the university through face-to-face; in case of high number of students, if necessary, premises of other universities or of the Ministry of National Education or of the Social Services and Child Protection Organization are also used.

2004-2005 academic year also marks the commencement of another e-MBA programme in Turkey. Sakarya University has used its experience in providing Internet-based certificate programmes to start an e-MBA programme in 2005 spring semester.

In parallel with the recent initiatives in application of Internet-based distance education techniques, researches and studies have been started to see the current situation, and to shape the future activities.

One of the most comprehensive of these studies is the one conducted by a group of academicians, led by the Middle East Technical University, with the support of private sector. The research was conducted as a means to develop a model for future higher education activities in Turkey, with special emphasis on electronic learning at undergraduate and graduate level. Since the final report has not been publicly available, this study will refer merely to the results of a questionnaire applied within the scope of that study with the participation of instructors and students of four Turkish universities.

The questionnaire applied to the instructors has shown that 74 percent of the participant instructors hold positive views about offering courses and/or degrees via Internet, while 20 percents holds negative views.

The reasons for holding a positive view about electronic learning are that (i) it is a requisite for the new era, (ii) it will ensure inter-university cooperation through information-sharing, which will eventually lead to quality learning, (iii) it is flexible in terms of time and place, (iv) it is cost-effective, (v) it is advantageous for those individuals who are out of the system, and (vi) it provides diversity in higher education.

The reasons for holding a negative view are mostly due to that fact that the instructors think electronic learning is not suitable for their area of expertise. Other major reasons seem to be lower level of interaction, and impracticality to replace traditional education.

Almost half of the instructors states that this technique should be made use of only in some courses. Of this half, 45 percent recommends that Internet-based distance education is most appropriate for theoretical, social and non-credit courses, whereas eight percent recommends it for graduate level.

Looking at the profile of the instructors, it is seen that half of them uses Internet to support their traditional courses, whereas only nine percent is experienced in online course development majority of whom emphasize that they will be wiling to participate in an online course development process if technical support is provided. It is interesting to note that although almost half of the participants recommend electronic learning for theoretical and social courses, more than half of the instructors who make use of Internet to support their traditional courses are experts in the area of natural and digital sciences.

Same study has shown that less than 40 percent of the students have computer with Internet connection. Almost half of the students state that they use Internet facilities at the campus for curricular activities between

one to six hours a week, whereas approximately 40 percent state they never do. More than half of the students say that computer and Internet facilities within the campus are weak and insufficient. Outside the campus, they mostly access the Internet in the Internet cafés or at home.

40 percent of the students believe that they will allocate less time to an Internet-based course than a traditional course, whereas 30 percent believe they will allocate more and 30 percent the same amount of time.

Students are asked that through which technique they would like to receive training after completing their undergraduate degree. Around 20 percent of the students prefer traditional means and more than 35 percent prefer a blended means, while only eight percent prefer totally virtual means.

Another study conducted to reveal student viewpoints related to web-based teaching practices is of Demirli (2002), who aimed to receive view of students attended web-based Instructional Technologies and Material Development course offered by Fırat University. He found out that the main reason of preferring web-based distance learning activity was its flexibility in time and place. Second important reason was to have the opportunity to actively participate in the course, on the contrary to passive receiver role in traditional classroom. Demirli concluded that web-based teaching practices were embraced by the students to a great extent in Fırat University.

CHAPTER III

RESEARCH DESIGN

This chapter discloses the research methods and procedures used in this study through an introduction of methodology, participants, instruments, and treatment of data related to the study.

This study aims to provide a roadmap based on an in-depth analysis of differences and similarities in the web-based distance education practices of three Turkish universities providing online degree programs.

The purpose is, through that in-depth exploration of three graduate degree programs offered online by three pioneer universities in Turkey from conception to implementation, to provide guidance for other Turkish higher education institutions to launch and implement web-based distance education programs successfully. The study traces how the idea of offering an online degree program has been formed, what administrative and managerial steps have been taken, what cooperative and collaborative relationships have been embraced, what challenges have been encountered, how these challenges have been overcome, what instructional factors have been considered, how faculty have been involved in the process, what lessons have been learned, and what role has been attained to e-learning in the future of higher education in Turkey.

3.1 RESEARCH STUDY PARTICIPANTS

"Purposeful sampling" (Patton, 1990) or as LeCompte and Preissle puts it "criterion-based selection" (1993) enables the qualitative researcher reach to "particular settings, persons, or events … in order to provide important information that can't be gotten as well from other choices" (Maxwell, 1996, p.70). Maxwell also quotes from Weiss (1994), who calls it "panels" where "people who are uniquely able to be informative because they are experts in an area or were privileged witnesses to an event" (p.70).

In Turkey, although there are several attempts to implement web-based distance education, only three universities have focused their attempts on *graduate degree* programs other than those higher education institutions mostly took *certificate* programs as their starting point.

Participants of this study were the vice rectors responsible for information technology related activities, program coordinators, faculty implementers and instructional technology experts of the following Turkish universities offering online graduate degree programs.

Vice rectors were the first contact points in each university. In all three universities, vice rectors led the researcher directly to the programme coordinators, who were said to be involved in all processes and to contribute better to the research being conducted. Programme coordinators were, then, contacted; and identification of the faculty implementers was accomplished with the canalisation of programme coordinators, who provided the researcher with the names of the faculty implementers for an interview.

Table 6 – Summary Table of Participants

	PROGRAM COORDINATOR	INSTRUCTOR	TOTAL
ANADOLU UNIVERSITY	1	1	2
BİLGİ UNIVERSITY	1	2	3
MIDDLE EAST TECHNICAL UNIVERSTY	1	2	3
TOTAL	**3**	**5**	**8**

The study interviewed coordinators of the three online graduate degree programmes (N=3) that constituted the whole population. Faculty implementers were as canalised by them (N=5), among a total of 57 full- and part-time faculty members working in three programmes.

The subjects of this study were not exposed to any unreasonable discomfort or violation of their human rights. A letter was sent electronically to the vice rectors of three universities, which was followed by a telephone call. The letter included the description and scope of the study, with an emphasis on the voluntary participation. Upon vice rectors' acceptance, first meetings were arranged and held accordingly.

Below is a brief summary of the history, mission, and academic characteristic of subject universities.

3.1.1 Anadolu University, Eskişehir[5]

Anadolu University (AU) is a state university established in 1958. It serves to approximately 20,000 on-campus students through various programs under 12 faculties, six schools, and four vocational schools. In

[5] The information on the history of Anadolu University is based on information provided at institution's website.

addition, more than 760,000 off-campus students are served through the School of Open Education.

Eskişehir Academy of Economics and Commercial Sciences, founded in 1958, constitute the beginning of Anadolu University. Named Anadolu University in 1982, this educational institution has become one of the pre-eminent institutions of higher education in Turkey and abroad.

Anadolu University houses 12 faculties, three of which are distance education, six schools and State Conservatory, four vocational schools, nine institutes (four graduate schools, five institutes) and 19 research centres.

The University is proud to implement one of the most successful distance education programs in the world that also is taken as a model by many institutions. Today, the number of students in the three distance education faculties is approaching 800 thousand.

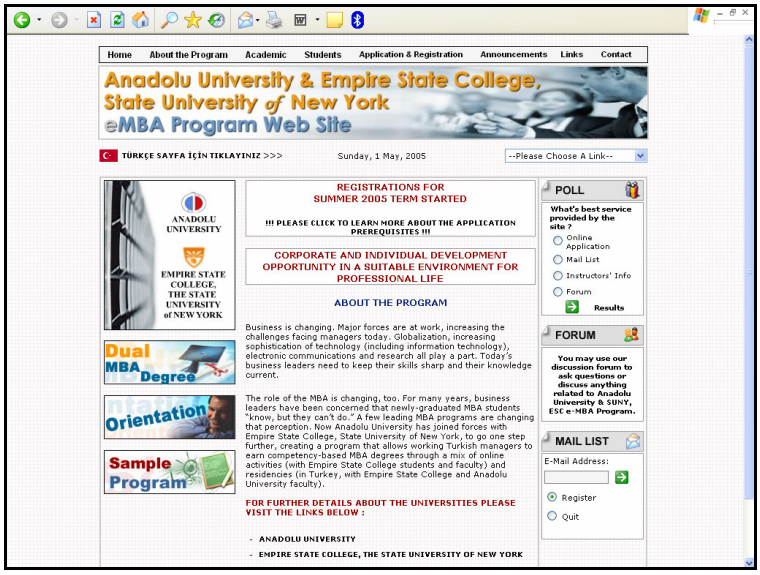
Anadolu University has over 1,500 faculty members who are dedicated to teaching as well as to excellence in their field. They place strong emphasis on academic endeavours and strive to make students' learning experience as meaningful as possible.

Distance education system also known as Open Education, with its faculties Open Faculty, Faculty of Economics, Faculty of Business Administration provides education opportunities to many who otherwise cannot continue with higher education. Today, the total number of students is about 800 thousand, and up to date the number of students to receive BA or associate degrees from the distance education programs is over 650 thousand.

The educational materials used in programs are designed according to self-study principles and the most recent developments in educational technology are incorporated. The books written by experts in their fields have been the basic educational material at Open Education Faculty. The books are all printed at the Anadolu University printing facilities.

Radio and television programs continue to support the textbooks. These television programs are produced at the Radio-Television Production Centre which has professional facilities. The constantly updated programs are broadcasted through the Turkish National Radio and Television network- TRT. Students reach their professors through e-mail, fax or telephone and receive answers to their questions during live programs. Recently, the university has started to provide a series of electronic learning facilities to enable its students to continue their training anytime and anywhere. This series consists of four components; namely, e-book, e-TV, e-xercise, and e-xam. The graduates of Open Education Faculty have the same rights and privileges of the traditional university graduates.

The AU offers an online graduate degree in Management of Business Administration in cooperation with the State University of New York (SUNY) since 2004. The program has reached 12 students from different cities from all over Turkey.



The responsible unit for coordination of Anadolu-ESC, SUNY e-MBA programme is the Faculty of Economics and Administrative Sciences. The programme is the first and the only programme which offers dual MBA degree and dual MBA diploma that are approved by the Council of Higher Education. The introductory material prepared for the programme states that the programme "is designed to provide the students with an interactive education process which helps participants to improve their professionalism." The programme includes residency-based instructions, along with seminars, workshops, and case studies for learners.

3.1.2 Middle East Technical University, Ankara[6]

Middle East Technical University was founded as Middle East High Technology Institute in 1956, "to contribute to the development of Turkey and Middle East countries and especially to train people as to create a skilled workforce in the fields of natural and social sciences". Foundation Act No.7307, enacted in 1959, marked the exceptional position of METU and those conditions depicting METU as a juridical entity. METU was organized as a typical American state university with a lay board of trustees who appointed the president of the university, as opposed to elected rectors in the other universities. However, following the first establishment of the Council of Higher Education in 1973, in 1976, the powers of METU's board of trustees was curbed, and an end was put to the special system of governance at METU, despite the exceptional constitutional clause maintaining its special status.

Starting in 1956, with the first academic program to start education as the Department of Architecture, today, there are a total of 37 undergraduate programs in five faculties of METU.

[6] The information on the history of METU is based on information provided at institution's website.

The number of undergraduate programs available in Graduate Schools of Natural Sciences, Social Sciences, Informatics, Applied Mathematics and Marine Sciences Graduate Schools is 67. Marine Sciences conducts the academic program studies at İçel-Erdemli.

The Informatics Institute was founded in 1996 to "(i) conduct interdisciplinary graduate programs to educate people with different backgrounds on Informatics and Informatics applications, (ii) to bring academicians and experts having different areas of expertise together to have a synergy in interdisciplinary education and research, (iii) to have a leading role in using and expanding the information technologies for well being of society, (iv) to contribute to the national and international research and development in Informatics."

The Institute has a multitude of graduate programs with full-time faculty and affiliated members from many departments such as Computer Engineering, Electrical Engineering, Industrial Engineering, Management, Education and Philosophy.

Besides as a research and development area, the Institute is involved with distance education as a teaching medium. Overseas applications to the online degree programs are accepted since the language is English.

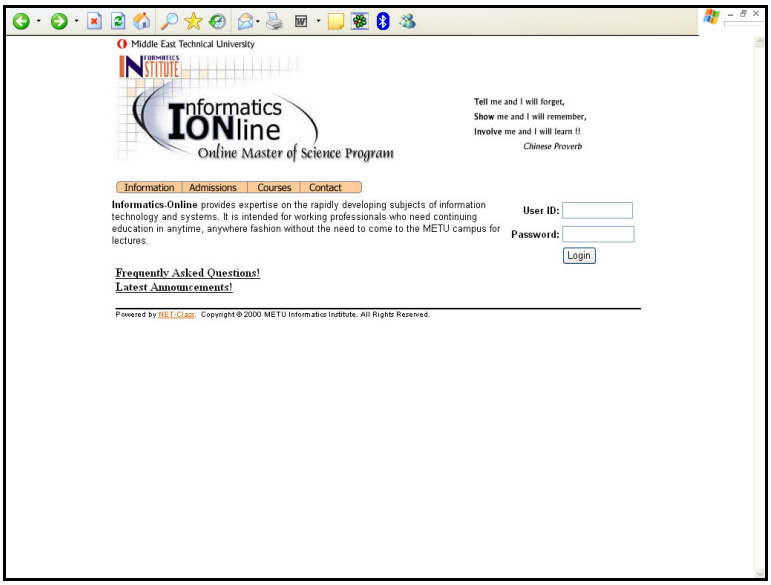
METU-Online is a general support service provided by the Institute for all courses in the campus. METU-Online uses a Learning Management System called Net-Class, developed in the Informatics Institute. NET-Class is a learning management system that provides an asynchronous learning environment for instructors and students alike. It allows the instructors to manage their courses without the need of extensive technical knowledge. The tool is also used as a platform for Informatics Online, as well as a support tool for regular face-to-face classroom courses.

All components of the NET-Class system is being developed by METU Informatics Institute since 1997, by taking into account the faculty

and student feedbacks in campus wide ALN courses. The tool is in continuous development and new features are constantly added.

The research and development area is implemented through the Distance Learning Centre, and The Distance Learning Laboratory affiliated to the Institute. The Distance Learning Centre aims "to conduct and coordinate research on distance learning and to monitor and lead current methods used for distance learning at and out of the university." Promoting an interdisciplinary approach to research and development in distance learning, the Centre aims a systematic accumulation and dissemination of knowledge and experience gained from current applications.

Informatics Online is an online graduate program which is offered by the METU Informatics Institute. It is accepted by the Council of Higher Education as a regular METU Master of Science program like other graduate programs.



"Informatics-Online provides expertise on the rapidly developing subjects of information technology and systems. It is intended for working professionals who need continuing education in anytime, anywhere fashion without the need to come to the METU campus for lectures."

3.1.3 Bilgi University, İstanbul[7]

The Bilgi Educational and Cultural Foundation was established in 1994 "(i) to establish and operate educational and instructional institutions focusing on foreign languages, social sciences, science and technology at all levels and kinds to conduct scientific and cultural research; (ii) to establish and operate museums to protect our cultural heritage; (iii) to organize seminars, briefings, conferences and/or similar gatherings for the advancement of our nation's cultural life; (iv) to extend provisional or monetary support to persons or representational organs that participate in cultural activities."

İstanbul Bilgi University, as a private, non-profit institution, had its place in the higher education system of Turkey in 1996. The aim was "to introduce a fresh outlook to an obsolete education system and to establish an independent international institution of education in İstanbul."

The medium of instruction is English, except for the Faculty of Law. The University consists of four faculties at the undergraduate level:

- Faculty of Economics and Administrative Sciences
- Faculty of Science and Letters
- Faculty of Communication
- Faculty of Law

[7] The information on the history of Bilgi University is based on information provided at institution's website.

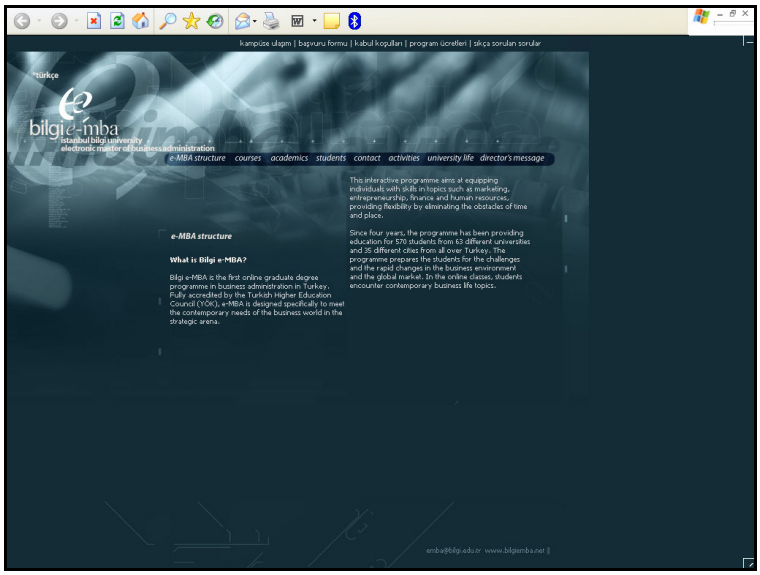
The School of Advanced Vocational Studies offers two-year undergraduate education in the following areas: Management, Information Technologies and Programming, International Trade Management, Tourism and Hotel Management, Public Relations and Advertising, Radio-TV Programming.

The Social Sciences Institute offers fourteen different programmes in the following areas: Business Administration, Cultural Studies, Economics, European Studies, Film and Television, Financial Economics, International Relations, Human Rights Law, Law of Economy, Music, Visual Communication Design, and Organisation Studies.

The University also hosts several centres to conduct research projects, academic and community activities.

Although a young university, currently there are 8,043 students, 1,757 of them on scholarships and 58 international students from 26 different countries, working toward their undergraduate and graduate degrees in 47 programmes under four faculties, a Social Sciences Institute and a Vocational School at two campuses at the heart of the city.

The Bilgi University offers an online graduate degree in Management of Business Administration since four years. It is the first online graduate degree programme in business administration in Turkey. Fully accredited by the Council of Higher Education, the program "is designed specifically to meet the contemporary needs of the business world in the strategic arena. This interactive programme aims at equipping individuals with skills in topics such as marketing, entrepreneurship, finance and human resources, providing flexibility by eliminating the obstacles of time and place" (Istanbul Bilgi University, 2003).



The duration of the Bilgi e-MBA programme is minimum three semesters. However, the programme is designed to flexibility to students to arrange their own schedules. Students are required to complete the programme in maximum six semesters. The programme is composed of three components: eight core courses, two elective courses, and a final project, making a total of 30 credits.

Completion of assignments, quizzes and tests by the students, as well as assessments by the instructors are held through the Internet. As per Regulation, "at least 50 percent of the passing grade comes from the final examination that take place under the supervision of academic staff while the rest is determined according to assignments and tests. A passing grade of 70 percent is required for the students to succeed in the final examination" (İstanbul Bilgi University, 2003, p.31).

Since four years, the programme has been providing education for 570 students from 63 different universities and 35 different cities from all over Turkey. The programme is accessed at www.bilgiemba.net.

3.2 METHODOLOGY

This study, in an "attempt to make sense of, or interpret, phenomena in terms of meanings people bring to them" (Denzin & Lincoln, 1998, p.3), made use of a qualitative approach to allow for an in-depth analysis of three important and innovative initiatives launched by three significant higher education institutions in Turkey. It aimed at uncovering experiences of administrative and instructional staff working for the selected universities, in order to propose a guide for potential providers of web-based distance education in Turkey.

This study makes use of content analysis study to gain insight into a process of conceptualizing, deciding, planning, and implementing an online graduate degree program by three different higher education institutions. Fraenkel (1990) states that content analysis, as "having a wide applicability in education research," can be used to "show how different schools handle the same phenomena differently" (p.483). Holsti's definition of content analysis is that it is "any technique for making inferences by systematically and *objectively* identifying special characteristics of messages" (Quoted in Berg, 2004, p.267). Berg (2004) considers content analysis as "a passport to listening to the words of the text and understanding better the perspective(s) of the producer of these words" (p.269).

Patton (1987) describes fieldwork as the key to the qualitative evaluation methods. "[H]aving direct and personal contact with people in the program in their own environments" (p.16), besides recorded information in selected documentation, the study will make use of other recordings arranged by the researcher in the form of interviews.

The function of the researcher in this study is, as Crano (1986) states, to focus on "what and how of the process" of the "consideration of *who says what, to whom, how, and with what effect"* (Lasswell, Lerner, & Pool, 1952, p.12 quoted in Crano, 1986, p.245). The content analysis

technique is also appropriate for the comparative nature of the study; since it will "tell us more about the social context" with all potential factors and influences (Cohen, Manion, & Morrison, 2000, p.165).

Fraenkel (1990) lists the advantages of content analysis: (i) content analysis is "unobtrusive," (ii) it is useful as a means of analyzing interview and observational data, (iii) the researcher is not limited by time and space to the study of present events, (iv) logistics of content analysis is simple and economical –with regard to both time and resources--, (v) the data is readily available and it permits replication of a study by other researchers (p.493).

This study, making use of content analysis technique, is a descriptive one to "determine(s) and report(s) the way things are" (Gay, 1992) in three Turkish universities offering graduate programmes through Internet-based distance education tools. It will employ interviews and documentary analysis to achieve its intended objectives.

3.3 INSTRUMENTATION

3.3.1 Interviews

Due to it's being an effective method for summarizing information as to the experiences, attitudes, opinions, complaints, senses and beliefs, interviews are considered as one of the most common research methods used in social sciences. (Briggs, 1986). An interview is "a system for collecting information to describe, compare or explain knowledge, attitudes, and behaviour" through a two-way communication between the interviewer and the interviewee (Fink, 1995).

Yıldırım & Şimşek (1999) lists the advantages of using interview method as (a) flexibility, (b) higher response rate, (c) chance to observe non-verbal behaviours, (d) control over the environment, (e) sequence of

questions to be asked, (f) opportunity to observe sudden reactions, (g) confirmation of data source, (h) completeness of the data, and (i) in-depth information.

This study made use of interviews to record, analyze and interpret the participants' opinions and perspectives on the web-based distance education experience in which they were involved. Semi-structured interviews were applied for utmost flexibility. This allowed the researcher to leave necessary space for what was not anticipated within the scope of the study, through open-ended questions to provide the respondents with a chance to innermost thoughts, beliefs, concerns and feelings (Creswell, 1994; Kerlinger, 1992).

To this aim, interview guides were prepared by the researcher to *canalise* the interviewees throughout the interviews in order not to lose the main focus of the study (Appendix A). Patton (1987) lists time management, systematic and comprehensive interviews with different people and more focused interaction in group interviews as main strengths of interview guides. The questions in the interview guide mainly directed the conversations "as a basic checklist" (Patton, 1987). Probing questions were employed to investigate deeper aspects when necessary.

Prior to the interviews, the potential participants were invited to take part in this study (Appendix B). Those individuals, who agreed to participate, were contacted by phone and a date was fixed for meeting at their convenience. Meeting place was always the participants' offices, in order to allow the researcher be "into the field" and make observations.

The interviews were tape recorded, and transcribed verbatim immediately after the interview in order to allow for control and mastery by the researcher to a greater extent. Transcriptions were returned to the respondents for approval, and they were informed that they were free to add if they determined any missing points in transcriptions. Additionally, the

researcher also took handwritten notes during the interviews, realizing their awesome asset in interpretation of the findings (Lincoln & Guba, 1985).

3.3.1.1 Individual Face-to-Face Interviews

Individual interviews were planned with vice rectors responsible for information technology related activities of the selected universities, in order to explore administrative and managerial aspects of offering a web-based graduate program starting from its conception to its implementation. However, due to direction of the researchers by the vice rectors directly to the programme coordinators since they were the ones who actively involved in all processes aforementioned, interviews with vice rectors were cancelled.

Program coordinators were interviewed individually in order to look into the depths of coordinating and technically managing an online degree program from the viewpoint of a mid-level administrator with direct link up to senior administration of the institutions and down to faculty and instructional technology experts, whom constitutes the whole team. Some questions in the interview guide prepared for vice rectors were added to the one prepared for programme coordinators, since interviews with vice rectors were cancelled upon their canalisation, and programme coordinators were also asked about conception, preparation, and design phases.

Total three individual interviews were conducted with three programme coordinators.

The interview guide prepared for the vice rectors included total twelve questions, to gain insight into mainly conception, planning, legal issues, administrative support, strategies, and views about the institution's place in future utilization of ICTs for education.

The interview guide prepared for the program coordinators included total eight questions, to gain insight into mainly conception, planning,

involvement of faculty members, instructional issues, evaluation, and views about the institution's place in future utilization of ICTs for education. Nevertheless, cancellation of interviews with vice rectors led the researcher to add the non-matching questions into the guide developed for program coordinators.

3.3.1.2 Focus Group Interviews

Focus group interviews were anticipated with faculty implementers. As quoted by Cohen, Manion & Morrison (2000), Watts & Ebbutt (1987) explain "such [group] interviews are useful … where a group of people have been working together for some time or common purpose, or where it is seen as important that everyone concerned is aware of what others in the group are saying." Patton (1987) also praises "group dynamics" to be created by focus group discussions contributing "to focusing on the most important topics and issues in the program" (p.135).

Since group interviews are practical and timesaving for large number of samples too, it was decided that focus group interviews would be conducted with faculty implementers to gather in-depth and specific information about their experiences as to offering an online graduate degree. Semi-structured nature of the method enabled the researcher to lead the interview to those areas undiscovered prior to the research design, while keeping the structure to determine the differences between and among the information obtained, and to make comparisons.

However, only one group interview was held with the faculty implementers working for Istanbul Bilgi University, whereas other faculty implementers were interviewed individually due to their strict agenda.

The interview guide prepared for the instructors included total nine questions, to gain insight into mainly instructional issues, evaluation,

administrative support, training and views about the future utilization of ICTs for education.

3.3.2 Documentation

Review of documentation was considered to allow the researcher to examine in detail the printed materials including information on targeted phenomenon.

Although documents and archives to be reviewed mostly depend on the nature of the research, Bogdan & Biklen (1992) and Goetz & LeCompte (1984) provides a long list in educational context ranging from textbooks, circulars, students records to handbooks, guidelines, and official documents. In addition to these, Forster (1995) lists for those researchers investigating an institution those documents including, but not limited to, mission statements, press releases, office memos, and strategic documents, while Bailey (1982) speaks of personal documents, periodicals, magazines, printed press, and books. Yin (1994) also lists examples of documentation as formal studies and media clippings, among others.

Yıldırım and Şimşek (1999) reveals advantages of documentation review as reaching unreachable subjects, preventing negative reactions, allowing for longitudinal analysis, allowing for a large sampling, providing uniqueness, respectively lower costs, and quality.

Accordingly, the researcher made use of laws, acts, roadmaps, strategy/policy papers, mission/vision statements, and other documents related to the scope of the study. Besides institutional documentation of the participant institutions of the study, documents were selected among the libraries of the Higher Education Council, the Ministry of National Education, and of international organizations such as the World Bank, the United Nations, and the European Union in order to explore national and supra-national strategies towards the use of information and communication

technologies to support and advance web-based distance education at the higher education level.

3.4 DATA ANALYSIS

As Glesne & Peshkin (1992) emphasizes, “data analysis involves organizing what you have seen, heard, and read so that you can make sense of what you have learned.” Organization is central element of qualitative data analysis, in dealing with huge volume of data obtained from interviews, field notes, observations, and documentary review.

With regard to this study, content analysis technique was conducted to reach concepts and relationships to explain data to be obtained. Those data summarized through descriptive analysis were examined in detail, and thus, missing themes and relationships tried to be discovered through a comprehensive content analysis.

“Organizing and simplifying the complexity of data into some meaningful and manageable themes or categories is the basic purpose of content analysis” (Patton, 1987, p.150). Accordingly, the process included (a) coding, (b) theme-finding, (c) organizing themes and codes, and (d) description and interpretation of findings (Yıldırım & Şimşek, 1999).

Accordingly, before holding interviews, a scheme was developed by the researcher in parallel with the conceptual framework and the research questions (Table-7). Initially, a number of themes were written down by the researcher, based on the related literature, in view of the research questions. Themes included in this “provisional start list” were given meaningful tags or labels by the researcher (Miles & Huberman, 1994). These initial themes and their codes were then transformed into sub-codes for more differentiation. Next step was the classification of these under certain patterns, each of which was also given a unique code in order to facilitate analysis and interpretation of the data collected.

Table 7 – Initial Scheme

REA	Reason	INSTR	Instructional Features	ROLE	New Role
REA-COMP	Competitiveness	INSTR-LEAR	Learner-Centered	ROLE-LLL	Lifelong Learning
RES-GLOBE	Globalization	INSTR-IND	IndivMualized	ROLE-ADU	Adult Learning
		INSTR-EXP	Experience-Based Approach		
RES	Resource Allocation	INSTR-STU	Student Profile	ADV	Advantages
RES-FIN	Financial Resources			ADV-ACH	Student Achievement
RES-PHY	Physical Facilities	ORG	Organizational Features	ADV-RES	Responsibility
RES-HR	Human Resources	ORG-FLEX	Flexibility	ADV-INT	Interaction
		ORG-COMT	Commitment		
BAR	Barriers	ORG-COMMN	Sense of Community	DISADV	Disadvantages
BAR-FIN	Financial Limitations	ORG-TRST	Trust	DISADV-TIME	Time-Spending
BAR-RES	Resistance	ORG-TEAM	Team Spirit	DISADV-DROP	Dropout
BAR-TECH	Technological Shortcomings	ORG-PION	Pioneering		
BAR-ILL	ICT Illiteracy	ORG-RESP	Responsibility	IMP	Important Concepts
BAR-DD	Digital Divide	ORG-ACPT	Acceptance	IMP-ECON	Economy
BAR-COMT	Lack of Commitment	ORG-TRA	Training	IMP-QUA	Quality
		ORG-REW	Reward	IMP-SUST	Sustainability
				IMP-COMT	Commitment

Table 8 – Revised Coding Scheme

ADVANTAGES OF DL	ADV-ACCS	Easy Access by Students
	ADV-COST	Cost-Effectiveness as an Advantage
	ADV-INTAC	Interaction as an Advantage
	ADV-STUACH	Student Achievement as an Advantage
	ADV-TECH	Technological Developments as an Advantage
BARRIERS TO DL	BAR-DIGDIV	Digital Divide as a Barrier
	BAR-FIN	Lack of Adequate Financing as a Barrier
	BAR-HR	Lack of Adequate Human Resources as a Barrier
	BAR-KHOW	Lack of Know-How as a Barrier
	BAR-NONLIT	ICT Non-Literacy as a Barrier
	BAR-PHYFCL	Lack of Physical Facilities as a Barrier
	BAR-PUBOP	General Public Opinion about DL as a Barrier
	BAR-RESIST	Resistance as a Barrier
	BAR-TECH	Technological Shortcomings as a Barrier
DISADVANTAGES OF DL	DISADV-DROP	High Dropout Rates as a Disadvantage
	DISADV-INTAC	Limited Interaction as a Disadvantage
	DISADV-TIME	Time-Taking
INSTRUCTIONAL FEATURES	INSTR-ACCS	Easy Access by Students
	INSTR-COM	Communication Tools
	INSTR-CONT	Content
	INSTR-EVAL	Evaluation of Instruction
	INSTR-EXP	Experience-Based Approach in Instructional Design
	INSTR-FBACK	Feedback
	INSTR-IND	Individualized Learning
	INSTR-INTAC	Interaction
	INSTR-LEARCEN	Learner-Centered Approach in Instruction
	INSTR-NDIGDIF	No-Significant-Difference
	INSTR-QUAL	Instructional Quality
	INSTR-STUPR	Student Profile in Instruction
	INSTR-SUIT	Suitability of Subjects for DL
	INSTR-SUST	Sustainability of Quality
	INSTR-TECH	Selection of Technology
FUTURE OF TECHNOLOGY IN LEARNING	FUT-ADLRN	Adult Learning
	FUT-BLRN	Blended Learning
	FUT-CAMLRN	On-Campus Learning
	FUT-FLRN	Flexible Learning
	FUT-LLLRN	Lifelong Learning
	FUT-MLRN	Mobile Learning
	FUT-OOLRN	Object-Oriented Learning
	FUT-TSRTLRN	Technology Supported Realtime Learning
SUPPORT	SUP-ADM	Support by Administration
	SUP-FAC	Support by Faculty Members
	SUP-TECH	Technological/Technical Support

Table 8 – Revised Coding Scheme (Cont')

FACULTY MEMBERS	FAC-ACPT	Acceptance by Faculty Members
	FAC-CHLNG	Challenge Faced by Faculty Members
	FAC-FBACK	Feedback by Faculty Members
	FAC-FLEX	Flexibility for Faculty Members
	FAC-INTAC	Interaction Facilitated by Faculty Members
	FAC-MOT	Faculty Motivation
	FAC-PION	Role of Faculty Members as a Pioneer
	FAC-RESIST	Resistance by Faculty Members
	FAC-REW	Reward
	FAC-TIME	Time Needed for Preparation of Materials
	FAC-TRAIN	Training of Faculty Members
ORGANIZATIONAL FEATURES	ORG-ACPT	Acceptance by Organization
	ORG-CHG	Organizational Change
	ORG-CHLNG	Challenge Faced by Organization
	ORG-CMNTY	Sense of Community
	ORG-COMMIT	Organizational Commitment
	ORG-COOP	Intra- and Inter-Institutional Cooperation
	ORG-EXP	Organizational Experience
	ORG-FLEX	Organizational Flexibility
	ORG-INVL	Involvement as an Organization
	ORG-LEARDO	Learning by Doing
	ORG-PION	Role of Organization as a Pioneer
	ORG-PLNG	Planning Process by Organization
	ORG-RESIST	Organizational Resistance
	ORG-RESP	Organizational Responsibility
	ORG-STRGY	Organizational Strategy
	ORG-TRAIN	Organizational Training
	ORG-TSPRT	Team Spirit in Organization
REASONS FOR DL	REA-CHG	Change in Demand
	REA-COMPETE	Competetiveness
	REA-GLOBE	Globalization
	REA-REQ	Requirements of Today's World
	REA-RESP	Responsibility
	REA-STUPR	Changing Student Profile
RESOURCES ALLOCATED	RES-COFIN	Co-Financing
	RES-FIN	Financial Resources
	RES-HR	Human Resources
	RES-PHYFCL	Availibility of Physical Facilities
STUDENTS	STU-ACPT	Acceptance by Students
	STU-FBACK	Feedback by Students
	STU-FLEX	Flexibility for Students
	STU-INTAC	Interaction by Students
	STU-MOT	Student Motivation

This coding scheme served as a main key for reading the data. The scheme was continuously revisited and revised during the interviews and documentary review, as new themes emerged. New themes led to a reorganization of the scheme, along with new patterns in view of the research questions to be responded, and the data obtained (Table-8).

It was not misleading to say that analysis started during the course of data collection through field notes "to keep track of analytic insights that occur during data collection" (Patton, 1987, p.144).

Following this "filling in" process during which new codes were added, the "extension" process was started, both as defined by Lincoln & Guba (1985), where the materials were revisited in view of the new scheme of themes and patterns.

A case matrix was developed by the researcher for each institution, a sample of which is shown in Table-9. This matrix aimed to ease the conclusion drawing by enabling the researcher to see the major points of the phenomenon on a single display. Three role-ordered displays (Miles & Huberman, 1994) functioned to reveal reflecting viewpoints of programme coordinators and instructors in each institution, and also to see how their thoughts dissented or focused on different themes.

Table 9 – A Sample Screenshot of the Case Matrix Used for Within-Case Analysis

BAR-PHYFCL	Lack of Physical Facilities as a Barrier			
BAR-PUBOP	General Public Opinion about DL as a Barrier	X	X	
BAR-RESIST	Resistance as a Barrier	X		
BAR-TECH	Technological Shortcomings as a Barrier			
DISADV-DROP	High Dropout Rates as a Disadvantage			
DISADV-INTAC	Limited Interaction as a Disadvantage		X	X
DISADV-TIME	Time-Taking		X	X
FAC-ACPT	Acceptance by Faculty Members		X	
FAC-CHLNG	Challenge Faced by Faculty Members	X		X
FAC-FBACK	Feedback by Faculty Members		X	X
FAC-FLEX	Flexibility for Faculty Members			
FAC-INTAC	Interaction Facilitated by Faculty Members		X	X
FAC-MOT	Faculty Motivation	X		
FAC-PION	Role of Faculty Members as a Pioneer		X	
FAC-RESIST	Resistance by Faculty Members			
FAC-REW	Reward	X	X	
FAC-TIME	Time Needed for Preparation of Materials	X	X	X
FAC-TRAIN	Training of Faculty Members	X	X	X
FUT-ADLRN	Adult Learning			
FUT-BLRN	Blended Learning	X	X	X
FUT-CAMLRN	On-Campus Learning	X		X

Three matrices were brought together as a meta-matrix, to serve as a content analytic summary table, in order to allow the researcher to see the similarities and differences across the cases with reference to the research questions, based on the scheme of themes and patterns developed (Table-10). Miles and Huberman (1994) mentions about two main reasons for cross-case analyses: (i) "to enhance generalisability", and (ii) "to deepen understanding and explanation" (p.173). In this study, a case-oriented approach was followed for the analysis, where the case was first reviewed within itself, and then it was compared and contrasted with other cases.

Table 10 – A Sample Screenshot of the Meta-Matrix Used for Cross-Case Analysis

FUT-TSRTLRN	Technology Supported Realtime Learning	X	X	X	X	X	X	
INSTR-ACCS	Easy Access by Students				X			X
INSTR-COM	Communication Tools		X	X	X	X	X	X
INSTR-CONT	Content				X			X
INSTR-EVAL	Evaluation of Instruction	X	X	X		X		X
INSTR-EXP	Experience-Based Approach in Instructional Design				X			
INSTR-FBACK	Feedback		X		X			
INSTR-IND	Individualized Learning				X	X		X
INSTR-INTAC	Interaction		X	X	X	X	X	X
INSTR-LEARCEN	Learner-Centered Approach in Instruction		X		X	X		X
INSTR-NDIGDIF	No-Significant-Difference	X	X	X				
INSTR-QUAL	Instructional Quality	X	X		X		X	X
INSTR-STUPR	Student Profile in Instruction	X	X		X	X		X
INSTR-SUIT	Suitability of Subjects for DL	X		X	X			X
INSTR-SUST	Sustainability of Quality				X		X	
INSTR-TECH	Selection of Technology				X	X		X
ORG-ACPT	Acceptance by Organization	X	X		X	X		
ORG-CHG	Organizational Change				X			
ORG-CHLNG	Challenge Faced by Organization	X						
ORG-CMNTY	Sense of Community				X		X	
ORG-COMMIT	Organizational Commitment	X			X		X	X
ORG-COOP	Intra- and Inter-Institutional Cooperation	X	X		X		X	X
ORG-EXP	Organizational Experience						X	X
ORG-FLEX	Organizational Flexibility				X			
ORG-INVL	Involvement as an Organization					X	X	
ORG-LEARDO	Learning by Doing	X			X	X		
ORG-PION	Role of Organization as a Pioneer	X			X	X	X	X
ORG-PLNG	Planning Process by Organization	X			X	X	X	

Based on the above-mentioned coding scheme, the collected data were treated in response to the research questions stated as follows:

Research Question 1: What are the reasons pushing Turkish higher education institutions to go for online learning activities?

To answer Research Question 1, interviews with programme coordinators and review of related documentation were used.

First question for vice rectors (*Your institution is one of the six offering a fully online degree/certificate in Turkey. What triggers have driven you to start this innovative activity?*) and for programme coordinators (*How has the idea of offering an online course emerged?*) were aimed at obtaining a response to this research question. Since interviews with vice rectors cancelled, these two questions were combined in interviews with programme coordinators.

Documentary review included regulations issued and decisions made/taken at the senior administrative level, along with mission and vision statements of the subject universities. Results of the documentary review were compared with the responses obtained from the interviewees to ensure reliability.

Research Question 2: What administrative and managerial factors are considered and steps taken for a web-based distance learning program, from respondents' perspectives?

Research Question 2 was answered through interviews with programme coordinators, based on findings of the researchers upon analysis of several interview questions. Particularly those interview questions posed to reach answers for research questions 1 and 4 contributed to a great extent as well.

A thorough review of laws, regulations, circulars and other related documents contributed to receiving a comprehensive response to this research question.

Research Question 3: What instructional factors are considered and how instructional concerns are responded?

Research Question 3 was answered based on the findings obtained from interviews with programme coordinators and faculty implementers. Particularly interviews with faculty implementers included direct questions about instructional dimension of the process (*"What factors have led you to start using advanced ICTs for teaching/learning purposes?" "Have you experienced problems while offering the course?" "Does the university support you, as online instructors, in this initiative?" "Have you evaluated the impact of the courses offered online on teaching/learning outcomes?" "What do you think about acceptance of such an innovative initiative by the other faculty? Do you think this has been an incentive for other faculty who is hesitant to use technology for instructional purposes?"*), which was contributed by points made by programme coordinators (*"What was the*

attitude of the faculty to offering of an online course within the university?"). There also included some questions about institutional viewpoint about instructional dimension like "*Apart from this program, does your institution host any other course management systems for other courses offered both undergraduate and graduate level?*"

Research Question 4: What challenges are encountered during the planning and implementation process? How these dilemmas are overcome?

Research Question 4 was designed to reveal the challenges encountered during the planning and implementation process in order to prevent from them in future initiatives. To this aim, the following questions were posed to the programme coordinators and faculty implementers: *"... was the planning and preparation process difficult? Have you encountered any problems or barriers in administrative, financial or instructional terms?" "What were the barriers/problems you experienced both during planning and implementation process?" "How has the planning and preparation process been handled at the administrative side?"*

Research Question 5: What is needed for establishment and effective implementation of effective utilization of ICTs for the purposes of providing learning at a distance at higher education level?

This research question was partially answered through an assemblage of responses by programme coordinators and faculty implementers. As well, they were asked particularly whether they need support for proper implementation of e-learning.

This question was the only one, which was highly contributed by documentary analysis. Documentary analysis included, besides policy papers and strategies employed by international universities, white papers, strategy papers, policies, regulations and initiative papers of multinational organizations, along with related research studies.

Research Question 6: What are the expectations of policy makers and administrators as to e-learning in Turkish higher education institutions? What steps should be taken to carry Turkish higher education at the expected level?

Research Question 6 aimed to reveal a picture of the Turkish higher education system with regard to new teaching a learning opportunities through interviews with programme coordinators, and with faculty implementers as well. The following questions were posed to the interviewees in order to have their thoughts and ideas about future use of Internet-based distance learning technologies at higher education level: *"What is the scenario in your mind, when you look at the future of online learning at higher education level?" "How do you think your institution is going to adapt itself to such development?" "How do you think e-learning is going to affect teaching and learning in your institution?"*

A review of policy papers, regulations and press releases also supported the findings of interviews.

3.5 METHODOLOGICAL LIMITATIONS AND ACTIONS TAKEN TO OVERCOME

Limited sample size and utilisation of pure qualitative techniques may be considered as the most important methodological limitations of this study, which are considered to impediment validity and reliability of it. As regards the methodological limitations and generalisibility of qualitative studies, "most writers suggest that qualitative research should be judged as credible and confirmable as opposed to valid and reliable" (Merriam, 1985). Similarly, it has been argued that it is necessary "... to develop an understanding of generalization that is congruent with the basic characteristics of qualitative inquiry" (1985).

In order to make this descriptive study more "credible and confirmable," with reliable findings, valid arguments and conclusions, and the researcher made use of the followings to the greatest extent possible:

3.5.1 Triangulation

Triangulation is used as a mean for much quality, greater validity and confidence of the study conducted (Kerlinger, 1992; Jick, 1979). Triangulation involves utilization of diverse sources of evidence to alleviate any potential bias (Yin, 1994). Creswell (1994) speaks of the concept of triangulation as it is "based on the assumption that any bias inherent in particular data sources, investigator, and method would be neutralized when used in conjunction with other data sources, investigators, and methods" (p.174).

Miles and Huberman (1984) define triangulation as "... supposed to support a finding by showing that independent measures of it agree with it or, at least, don't contradict it" (p.235). Patton (1980) also points out that "there is no magic in triangulation" (p.330); the point is "... to study and understand when and why there are differences" (p.331).

The concept of triangulation in social sciences goes back to 1959 when Campbell and Fiske published their paper on application of a "multitrait-multimethod matrix" for "establishing validity of measures" (Mathison, 1988, p.13). Following Webb, Campbell, Schwartz & Sechrest's using the term "triangulation" in 1966, Denzin (1978) speaks of "how to triangulate" and of four types of triangulation: (i) data triangulation, (ii) investigator triangulation, (iii) theory triangulation, and (iv) methodological triangulation.

Methodological triangulation includes "within-method" which makes use of different sources of the same type, and "between-method" which make use of sources of different types (Denzin, 1978; Creswell, 1994).

This study followed "between-method" strategy through interviews and documentary review. Furthermore, "within-method" strategy was also of interest through interviewing with different participants of the same phenomena.

3.5.2 Member Checks

The researcher conducted member checks during the course of the study, when necessary, to ensure an active Conduct Member Checks: Initiate and maintain an active process on the interpretation of data.

3.5.3 Peer Consultation

During the course of the study, the researcher engaged in peer consultation actively, especially during the data evaluation process. Besides the researcher herself, a colleague working in the Department of Sociology also coded the data obtained and transcribed in order to ensure interrater reliability.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF RESULTS

This chapter provides an analysis of the interviews held with the participants, and of documentation related to implementation of degree programs offered through Internet-based distance education technology. The analysis of the collected data is presented on the basis of research questions of this study, the purpose of which is to provide guidance for other Turkish higher education institutions to launch and implement web-based distance education programs successfully, through an in-depth exploration of three graduate degree programs offered online by three pioneer universities in Turkey from conception to implementation.

4.1 PURPOSE OF THE STUDY REVISITED

The study aims to trace how the idea of offering an online degree program has been formed, what administrative and managerial steps have been taken, what cooperative and collaborative relationships have been embraced, what challenges have been encountered, how these challenges have been overcome, what instructional factors have been considered, how faculty have been involved in the process, what lessons have been learned, and what role has been attained to e-learning in the future of higher education in Turkey.

The following research questions are determined to reach the aforementioned purpose of the study:

1. What are the reasons pushing Turkish higher education institutions to go for online learning activities?
2. What administrative and managerial factors are considered and steps taken for a web-based distance learning program, from respondents' perspectives?
3. What instructional factors are considered and how instructional concerns are responded?
4. What challenges are encountered during the planning and implementation process? How these dilemmas are overcome?
5. What is needed for establishment and effective implementation of effective utilization of ICTs for the purposes of providing learning at a distance at higher education level?
6. What are the expectations of policy makers and administrators as to e-learning in Turkish higher education institutions? What steps should be taken to carry Turkish higher education at the expected level?

4.2 PARTICIPANTS OF THE STUDY

Although Turkey has been involved in an endeavour towards the utilization of information and communication technologies for administrative and instructional purposes at the higher education level, especially giving praise to all efforts of online learning, at the time of planning and writing-up of this dissertation, there are three universities in Turkey offering a graduate degree through Internet-based distance education

platform: Istanbul Bilgi University, Ankara Middle East Technical University, and Eskişehir Anadolu University. The fourth institution, Sakarya University, which would start an online graduate degree in the second semester of 2004-2005 academic year, was discounted since no data could be obtained as to the implementation process. Similarly, another graduate program offered online by the Eskişehir Anadolu University, called e-Accommodation, was also omitted due to identical grounds.

Participants of this study were anticipated to be the vice rectors responsible for information technology related activities, program coordinators and faculty implementers of the following Turkish universities offering online graduate degree programs: Istanbul Bilgi University, Ankara Middle East Technical University, and Eskişehir Anadolu University.

Vice rectors of all three universities were contacted for setting an interview primarily; however, all three vice rectors canalised the researcher directly to the program reasoning out that program coordinators were the ones who were actively involved also in the planning process and they, themselves, could not be of much assistance to the researcher.

Thus, the researcher continued her study through interviews with program coordinators, faculty implementers and instructional technology experts involved in the planning and implementation of the online programmes concerned.

4.3 WITHIN-CASE ANALYSIS OF INTERVIEWS AS OF RESEARCH QUESTIONS

The following part puts forward an analysis of the interviews, in view of the research questions stated in this study, as per each case. The quotations given are translated from documents and from transcribed interviews by the researcher herself.

4.3.1 Anadolu University

4.3.1.1 Research Question 1

What are the reasons pushing Turkish higher education institutions to go for online learning activities?

Beyond any other reason, Anadolu University considered it as its responsibility and duty, in view of its mission for establishment. Programme Coordinator 3 described this process as a '*routine work*', since the institution "*has an important place worldwide in terms of distance education technologies.*" She also put forward the reason for going for a distance education program through Internet, saying that *"... because education market is quite appropriate for such an intervention. It is not full… While I am saying 'market' I do not imply that we see it as a commercial activity. If you live with us here even just one day, you will see that we are implementing this Project with an amateur spirit… It is not something commercial, but if you start something you have to be successful; and if you are going to be successful, there should be a demand for it. Thus the reasons are that, first, we see a gap about e-learning, secondly we believe and we are very confident that we will be very successful in this effort, and thirdly, our partner, SUNY ESC has been offering an online MBA programme in the US for sometime and has a substantial experience on this area."*

4.3.1.2 Research Question 2

What administrative and managerial factors are considered and steps taken for a web-based distance learning program, from respondents' perspectives?

Administrative issues were considered to be the smoothest part of this initiative, since the decision to have the cooperation with the SUNY at the graduate level through an online degree program was of the university administraton. Planning process also witnessed the active involvement of the university administration, even the rector himself.

Programme Coordinator 3 described it as follows: *"We did not experience any problem on the side of university administration. We have their full support. Unless we have this support, we cannot be at this point. We cannot realise such a programme as a state university. It is impossible... We trusted our administration... We trusted our technology..."*

Same support seemed to be received from the Council of Higher Education, since it was this body which draw the framework of the protocol agreement between the universities.

4.3.1.3 Research Question 3

What instructional factors are considered and how instructional concerns are responded?

Profile of the learners was the major factor considered during the instructional design process. Forums were considered vital for a proper follow-up of the program. No group projects were preferred until now, but learners were urged to actively participate in lessons by instructors. Asynchronous communications tools were made use of due to the profile of

students, since they were professionals who could not make real-time gatherings.

Instructor 5 appreciated the value and importance of the content, but his emphasis was on another issue beyond the content: *"Content is important, but it should be supported by means of knowledge management, through exercises, through counselling, through electronic databases, and such terms."*

4.3.1.4 Research Question 4

What challenges are encountered during the planning and implementation process? How these dilemmas are overcome?

Challenges encountered during the planning and implementation processes were regarded as minor problems with potential solutions. Programme Coordinator 3 responded to the question as to whether they faced any major problems during the planning process: *"Now, yes, I mean we had problems. But you know, everything that needs to be analysed and improved is a problem. But, I can say easily that we did not have almost any problems that might cause serious trouble or interference."*

Having instructors involved and committed to what they were supposed to do did not cause a vital difficulty for the institutions, but it was not easy either. Program Coordinator 3 told about that involvement process: *" We are an on-campus department… Therefore, some part of our faculty members are also shaped in that context, teaching in classrooms through face-to-face methods, in the graduate studies as well. However, there is one important thing that our staff is so young. They are fond of change. They are very flexible, and of adaptable quality and capability… We held long, long*

meetings before and after the planning process. At the beginning, the Rector himself was in the process. It is always like this. Top-level management should be there, when it is the case for an important, different and radical change. In order to show decisiveness… Our Rector is a beloved professor of our institution, by everyone. So, we started it with his support first. We held long, long meetings. We explained the phenomenon to each other. We instructed each other. We persuaded each other that we could do it well. We had the full support of our colleagues with distance education experience. They told us not to be afraid. They showed us the technique, and said that this was done in that way, etc… We already knew what to teach. We just had to persuade ourselves that we already know and teach these subjects in the classroom, and all we had to do is to carry our know-how to distance education platform."

This was also emphasized by Instructor 5. He admitted that resistance or hesitance was a normal reaction in any innovation, especially if it involved technology: *"At the first place, yes, you can see it anywhere related to technology. Our chance is that instructors here are middle-aged, and when this is the case attitude to technology is more positive ... It did not happen in a minute of course. There was a serious training phase. Training was both focused on the use of software, and on the pedagogical issues in e-learning, especially on ensuring interaction between faculty members and learners, motivation, and management of an online classroom."*

Face-to-face meetings with the learners was considered very important for involvement of learners into the program. Instructor 5 said that the university's experience with

traditional distance learning provided for years by the Faculty of Open Education led them to focus on interaction, being made stronger with face-to-face orientation programs and meetings during the semester.

Technical issues and problems related to selection of technology was another concern. The institution started with a technological platform, which they had to change after some time. The current program operated on a commercial learning management system, and the institution considered development of a brand new platform for itself as reinventing the wheel and loss of time.

4.3.1.5 Research Question 5

What is needed for establishment and effective implementation of ICTs for the purposes of providing learning at a distance at higher education level?

"As in every learning process, e-learning should be learner-centred," said Instructor 5, *"... it is not just an institution upload the content to the web, and assume that the learner takes it. This is not right. This leads to no interaction between the institution and the learner ... Flexibility should be provided to the learner."*

Flexibility was considered one of the most important factors to ensure student involvement, which was as vital as involvement and commitment of faculty members.

Several issues might be regarded vital for commencement and initial implementation an effective distance learning programme; however, quality and accordingly sustainability of the programmes were definitely emphasized by Programme Coordinator 3, who spoke of different aspects of their programme, and attracted the attention to sustainability:

"... this programme has diverse aspects. It has an academic aspect, it has a marketing aspect, it has a coordination aspect, plus there is a relationship with the Council of Higher Education. Of course, it is important to start it, but it is not enough, never... Sustainability is more important. It is very important to continue at the anticipated level. I think that this intensity will never end, but is going to continue progressively."

4.3.1.6 Research Question 6

What are the expectations of policy makers and administrators as to e-learning in Turkish higher education institutions? What steps should be taken to carry Turkish higher education at the expected level?

Anadolu University considered itself as a pioneer in the area of distance learning, due to its vast experience for decades. Programme Coordinator 3 saw the boom of information and communication technologies and their role in distance learning as a natural accompany of the future: "*... in fact this is the trend in the world. There is no way out. This is what we emphasized in our meetings... We said 'Look, there is no way out. We have to be in the middle of this process, we have to be pioneers of it.'"*

She implied that online learning activities in their institution already influenced traditional courses being offered: *"Besides, our faculty members partially have their courses through the Internet... It is being done here. Including submission of assignments, discussion forums, etc. In fact, distance education is a part of formal education today."*

4.3.2 Bilgi University

4.3.2.1 Research Question 1

What are the reasons pushing Turkish higher education institutions to go for online learning activities?

Bilgi University started this initiative in view of such needs of its on-campus MBA students as continuous support, sense of community, among others. Programme Coordinator 1 said he considered it as a "*serious problem*": "*... these people work, they enjoy learning, they learn, they become good graduates; but this does not become a whole thing, because they are so tired when they come to class ... We have thought it would be good to have a web site, with the ever-developing web technologies, and to support classroom environment*." It was, then, the idea of the university administration to transform it into an online degree program, which would be the one to receive first accreditation from the Council of Higher Education.

The reason behind starting an initiative of having an online degree program at Bilgi University was, at the beginning, to support real-time classroom teaching with electronic learning techniques; then, it turned out to be a separate program to train qualified workforce that the world of business demanded, who needed to receive a more flexible education in more flexible learning environment. This change in demand from the potential students, in parallel with the requirements of today's world, according to Programme Coordinator 1, was a good reason for utilization of electronic learning; besides it was necessary to provide this opportunity to those individuals living in remote cities or towns and were

not able to attend to quality training programs as this one because of geographical shortcomings, among others.

4.3.2.2 Research Question 2

What administrative and managerial factors are considered and steps taken for a web-based distance learning program, from respondents' perspectives?

At the Bilgi University, it was the university administration's initiative to offer an online degree program, based on Programme Coordinator 1's initial idea of supporting traditional MBA courses through online: *"I thought of supporting classroom environment with ever-developing web technologies. People in the university liked the idea. But what I did not think of was proposed by the university administration: 'Why don't we offer it as a programme?' ... They told me to make it happen, and said 'You have to do it; so, tell us what you want.' ... I only wanted a room, outside my department."* The university administration gave him a room without questioning, and now the programme has a separate physical facility in the university campus.

A review of international examples was combined with domestic needs and characteristics, and the procedures and criteria included in the Regulations issued by the Council of Higher Education was taken into consideration. The team had the full support of the Council, as well as of the university administration, and the program became the first accredited online degree program of Turkey. Here, this supportive attitude of the Council was of mentioning, since it implied the decision of the country to take steps in responding to the changing needs of its citizens.

Programme Coordinator 1 told that one of the members from the Council *"... told us to start this project without making any mistakes, because we, as the country, had to try some and learn accordingly."* The programme offered by the third institution was developed within the scope of a framework agreement signed by the Council with an international university from the United States of America. Thus, Programme Coordinator 3 emphasized the fact that *"No, we did not have any problem with the Council of Higher Education because it was the Council that developed the framework agreement. We had no difficulty with it. Our concern, as I said, was to do this job in the best possible manner."*

Another point emphasized here was the support of the Middle East Technical University, which was also in the process of developing its own online degree program. Close cooperation at the administrative level, both intra- and inter-institutionally, was of critical importance.

It was observed that the Bilgi University did not encounter a major problem on the administrative side due to its flexible organizational nature. The university administration's commitment to the program, sense of community and team spirit were all continuously felt by all partners.

4.3.2.3 Research Question 3

What instructional factors are considered and how instructional concerns are responded?

Instructional concerns were considered at the foreground at the Bilgi University. The profile of learners in the program helped to shape the instructional design: adult learners, having a full-time job, not having opportunity for an on-

campus learning experience both in terms of time and place, dispersed throughout the country, and wishing to have a chance to train themselves professionally. Programme Coordinator 1 stated that during the decision-making process for course design, *"we [they] decided not to go for synchronous. These people would have come to the classrooms, if they had been able to do something synchronous. We started from the idea that we would provide some things to those people who could not come to classroom at those times available for them."*

Faculty involvement in course preparation and content development was active and intense for all three programmes. It was told to be mainly experience-based, by all participants; and course preparation was considered to be an integral part of a whole project. Instructor 2 described it as follows: *"We haven't thought of it on course preparation basis. It was a whole project, and course preparation was a part of it. If you outsource it to someone saying that you will give your course online from now on, it is more difficult. But, for us it was not so since it is blended within the structure of that general project"*.

The instructors considered this process a long, burdensome, but very critical to the success of a programme. Some, as well, spoke of its added value to the normal on-campus courses they offered. Instructor 1 commented that "*[Course preparation] needs more time, because [we have to prepare] written and visual materials... It is not like having your small notes in your hands, and repeating these notes in front of the board... It needs more labour. Especially if you want to have quality materials, it is equivalent to book-writing..."*

Nevertheless, Instructor 1 welcome this heavy process gladly since it contributed to his profession as an instructor: "*This is the rewarding part. Materials you prepare and collect for online becomes a textbook, and be transformed into a classical tool. This is very nice."*

Instructor 2 agreed on that detail, and emphasized utilitarian outcomes of this process: "*Materials we prepare for online contributes to normal face-to-face classes... It feeds normal classes. In the past, of course, we used to prepare some things; but they were written in separate papers around the office. Now, they are all ready. We can take whatever we want and give to learners. It is very comfortable."* It would be right to note here that this course notes prepared by the instructors of this programme were consolidated under several textbooks, printed, and brought out to the use of all on-campus or off-campus learners in the country.

4.3.2.4 Research Question 4

What challenges are encountered during the planning and implementation process? How these dilemmas are overcome?

The only major challenge encountered by the university was that, after the decision-making process they felt the lack of know-how. Program Coordinator 1 also emphasized that they learned it by doing: *"As we move along, we learn."* This learning process also involved faculty members and technical staff. Program Coordinator 1 stated that they also did not have a difficulty in having faculty members involved in the process at the beginning. The case was a bit different at the instructors' side, he said, since he learned afterwards that they were hesitant about it: *"I heard later on, they were*

talking to each other that 'This guy is crazy, why do people pay just to read some things on the Internet. But he is our friend; so let's support him in this effort... But then they told me I was right. But as I said, these challenges were overcome within our friendship relationship with each other, and we said 'Yes, let's do it.' ... Now many people believe in it. They believe in because the project has become a success. They believe in because it is well-known throughout Turkey, and worldwide."

While full support and commitment of the administration brought all possible financial, technical and physical resources, the instructors seemed to complain about technical barriers, which did not allow them to actualise what they created in their minds as ideal. Instructor 2 stated that technical features limited his creativity in realising what he imagined: *"In technical terms, yes. There has been technical barriers to realize what is in your head, what you want to do. Therefore, we, somehow, had them discounted for such reasons ranging from low connection speed to non-readiness of the platform at that time or to its being a time-taking process."*

4.3.2.5 Research Question 5

What is needed for establishment and effective implementation of ICTs for the purposes of providing learning at a distance at higher education level?

Readiness of both learners and instructors was one of the most significantly expressed motives for an effective online learning activity. Adoption and acceptance of new information and communication technologies by faculty members was considered very important by the respondents.

Instructor 1 emphasized the fact that faculty members might not be willing to change their traditional practices, and that it was necessary to break this point giving way to accepting and adopting new ways of teaching and learning: *"Sometimes, you cannot persuade people to use computers, to work with computers, or to create computerized work processes. They stand alone with several excuses. They want to live their personal and professional lives with their old habits. It will happen sooner or later, but we don't know when or at what speed exactly... Therefore, it is necessary for everyone to break his/her ego, say 'I need training' and either train himself/herself or demand for formal training. At least, everyone who considers himself/herself unqualified in that area... And this does not happen all the time."*

Technology-equipped and innovative faculty members would be futile, stated the respondents, without learners ready and prepared for online learning. This was considered to be the case especially on the undergraduate level, where students have just been out of their secondary education without having equipped with those skills required. *"Undergraduate students do not seem to be ready for self-learning, self-studying, self-interpreting, and then idea-developing processes. If this is overcome, it will happen."* Said Instructor 2, speaking of the so-called holes in the Turkish formal education system that was in the process of defeat by newly introduced reforms.

The instructors, in this regard, praised the utilization of online tools in support of traditional courses offered by the university in its contribution to create some kind of cognisance both by instructors and by learners. *"In fact, such a general consciousness is there, both for instructors and for*

students," said Instructor 2. He continued that *"The university has an online education system in itself. I don't know the percentage, but those instructors who wish to do so put their course-related materials there. They prepare things related to their courses. No barriers there... Some instructors do it, some do not. Some do not because s/he does not want to, some because s/he does not believe its usefulness and some because s/he cannot manage it."*

Among all, after a training program started, quality and sustainability issues came into the foreground. This was also the concern of Programme Coordinator 1: *"Giving a diploma out of this project bounds us. It is not easy to graduate from this program, since we have to ensure quality and sustainability of this diploma in the long—term."* To this aim, it was decided to provide a refreshing training to all MBA graduates, both online and traditional, to keep them updated with the recent advancements in their profession.

4.3.2.6 Research Question 6

What are the expectations of policy makers and administrators as to e-learning in Turkish higher education institutions? What steps should be taken to carry Turkish higher education at the expected level?

Instructor 1, while emphasizing the role of electronic tools in today's world, stated the unavoidable existence of traditional on-campus instruction at higher education: "*There is nothing without an e- today. However, there are things which can be taught through e-learning, and there are things which cannot. I mean, I don't think that we can totally disregard interacting with people. Consequently, instruction will*

become a whole. E-instruction or e-learning will be a part of it, and real-time on-campus learning will be the other part."

The idea that electronic learning would also change the way on-campus students learn was also praised by other respondents. Instructor 2 stressed the fact that online learning would have a significant impact on traditional education. Instructor 2 said: *"Perhaps, the format of face-to-face courses will change. Knowledge transfer may be held in electronic format. There is no problem with that. Student receives that information when s/he reads. There are exercises, questions, problems, cases, etc. And, they have their own assessment tools. There seems no problem with it. But, it is more useful to hold such parts of the courses as discussion, case, which needs more interpretation face to face. Therefore, maybe it will turn out to become a format where burden of the main course shall be transferred to the e-, and where course shall be treated more like a discussion platform. I think that would do good."*

The arguments declared by the respondents met at utilization of information and communication technologies as a tool to achieve the best model for education. *"Yes, e-learning is a magnificent thing for those learners who cannot come to the classroom, but it is not so by itself. It is not enough by itself. B-learning is a really good model. We have to go for b-learning, which is blended learning"* said Programme Coordinator 1, and continued, *"when we consolidate all these pieces, a really good model will be created."*

Programme Coordinator 1 made another point that Turkey should be in this process with all relevant institutions; public, private, profit, non-profit... *"Not only the universities... Universities are institutions which produce and disseminate*

knowledge. They are natural part of it. But we have to involve in this knowledge renewal process with all our institutions, all kinds of education companies and other commercial beings. We have to do it as the Turkish society."

In adaptation process to the advancements in information and communication technologies, instructional aspect was mentioned as of utmost importance: *"If the world goes for it, we will be a part of it,"* said Programme Coordinator 1, *"but, according to me, the most important thing is appropriateness of the content. Right content shall be given to the right person through the right methodology. I think the opposite of it is the reason behind failure of e-learning projects in the world. Forgetting about the content..."*

Emphasis on content brought with itself an argumentation for its management, and new roles required for knowledge management. Programme Coordinator 1 was sure that instructional technologies would gain much more importance in the future. Along with it, *"content developers will surely gain importance. The most important of all is those people who direct it according to the needs. They are designers. I believe knowledge designers will be very important... I mean both content development and management of all... Knowledge management. I call it management of the knowledge traffic. This is also how I define an instructor"*. He summarized the scenario as follows: *"E-learning has no future. E-learning will create a magnificent future, but not for itself. We have to transform this process into lifelong learning, into continuous learning which takes place wherever and whenever you are available, which is held in those ways you want to have, and which is designed based on your needs. This is the educational model of the future."*

4.3.3 Middle East Technical University

4.3.3.1 Research Question 1

What are the reasons pushing Turkish higher education institutions to go for online learning activities?

The online program of the Middle East University is provided by the Informatics Institute, and this institution also considered the initiation of this program as a natural consequence of its existence.

Programme Coordinator 2 considered the start of this programme as a regular task of the Informatics Institute: *"It was the time we just established the Institute, and we had some missions to fulfil. One of them was to expand the informatics education at undergraduate and graduate level. We were conducting a Project for the Council of Higher Education, which focused on informatics education in universities. There came the training of faculty members on informatics… We were thinking that how we were going to reach all faculty members in the country… I participated in a conference in the US. This e-learning concept was new at that time. We thought that we could use it for training of faculty members. Our rector at that time liked the idea. He embraced the idea so much, and he enthusiastically said that he would support us if we did it… Then we were in the middle of this area… We completed that certificate programme, and trained approximately 100 faculty members from 35 universities online. The name of the programme was 'Information Technologies,' and we decided that our next step would be a masters' degree on that subject area."*

4.3.3.2 Research Question 2

What administrative and managerial factors are considered and steps taken for a web-based distance learning program, from respondents' perspectives?

At the Middle East Technical University, electronic learning initiative was started as a result of a search for training faculty members in other universities in the most efficient way, and it then turned out to be degree programme. It was an institutional initiative, and the team had the full support of the university administration.

Another important issue was that the programme coordinator herself was a member of the committee established within the Council of Higher Education to issue the Regulation on Inter-University Distance Higher Education Based on Information and Communication Technologies.

4.3.3.3 Research Question 3

What instructional factors are considered and how instructional concerns are responded?

The most important factor of the instructional dimension of online learning was considered as interaction by the instructors interviewed. In order to keep the interaction at the desired level, various techniques were to be employed by the instructors. Instructor 3 related it to the self-discipline of learners. He pointed out that "*people cannot realize that this is not so different from a traditional on-campus program. They think that they can handle it by a quick reading right before the final exam.*" He said regular postings to the forum, weekly assignments, leading to discussion and other techniques were made use of in order to keep the learners in contact with the program. One other point made was that this

difficulty to direct one learner to actively participate in the lesson was not unique for online learning merely; it was also valid for on-campus teaching.

Instructor 4 took the attention to motivation, pointing out that learners should have been motivated in order to learn, since *"interaction is limited. They have to be motivated, and ask a lot of questions in order to understand; and we have to take time to respond to these questions."*

As seen, for the faculty members, additional workload and responsibility that was caused by online learning was also mentioned during the interviews. Instructor 3 considered the instructor's role in online learning difficult and challenging: *"You prepare and pose questions, receive responses; but you cannot receive responses as fast as in traditional classroom teaching, because it is asynchronous here. Communication is slower, so feedback of the learners delay."* This was considered something that took time. Programme Coordinator 2 also spoke of it: *"The time spent by instructors for courses is no different from the time they spent for other courses. Maybe it is more."*

4.3.3.4 Research Question 4

What challenges are encountered during the planning and implementation process? How these dilemmas are overcome?

Technical side was seemed to be rather challenging among these levels, for all three of the institutions. It was, said the participants, mostly due to the fact that it was a brand new experience for them. They did not know where to start, what to do, and what platform to use to provide effective learning environment. All three universities in the scope of this study

supported each other in the planning and preparation processes.

Program Coordinator 2 described it as follows: *"... a technical difficulty... in fact, neither they [other institution] nor we did know what to do since it was a novel arena. As a matter of fact, no one had an idea about it in the world. We just jumped into it. I cannot say that we faced major problems, also in administrative terms. But, it was really difficult not able to know what to do. Instructors, for example,... wanted to know how they would act during the instruction. We tried to train them in that subject, but how are we going to do this? We also did not know about it. We learned how to do it by ourselves. Let us say, we learned it by doing. Now, we have a serious volume of know-how."*

Acceptance by faculty members were not a problematic issue at the METU, due to the nature of the degree program offered. Technology was already accepted, but for its use in instruction, faculty members were provided with training and support, as needed, by their colleagues from the School of Education. Guidelines were delivered to the faculty members, emphasizing the important concepts and applications in electronic learning.

However, the common challenge emphasized both by the programme coordinator and the instructors at the METU was that electronic learning did not reach the level of face-to-face learning yet in the program. They stated that they were in the process of improving the program through feedback from instructors and students obtained during impact assessments, through a continuous review of other examples and through other means, in order to raise the quality and to remove the

perception of online learning in the eyes of several people as non-quality.

Programme Coordinator 2 also revolved around two main concerns; namely need for financial resources, and image of distance learning in the eyes of audience: *"It needs money... A resource is needed, and this resource is not easy to create. This is why other departments are not inclined to e-learning. I mean you will prepare for the course, you will do much more effort, and the programme you will have at the end will not be significantly different from those you open face-to-face. We have other paid programmes... This is one of them. But it is the same thing; it would be the same if we offered it face-to-face. This has a reason. Because such kind of education, I mean distance education is considered as non-quality as an image. We could not change it. We really wanted to change it, but it is very difficult"*

4.3.3.5 Research Question 5

What is needed for establishment and effective implementation of ICTs for the purposes of providing learning at a distance at higher education level?

One of the most significantly expressed motives was readiness of both learners and instructors for an effective online learning activity. Programme Coordinator 2 stated importance of consciousness especially of learners that *"Students also have to experience a certain process for e-learning. Now, for example, METUOnline is a good start for this. Students, at least, get used to make use of such a step... I think it would be more useful, if students embrace this idea at first. Really, that students do not embrace it has a negative influence."*

Student motivation was strengthened by the efforts of the faculty members, said Instructor 4. He regarded it crucial to ensure communication and interaction, and to hold the discipline, which was easier in traditional face-to-face classroom teaching. Communication tools granted by technology should have been used as effective means to achieve these aims.

However; selection of appropriate subject area was considered as important as selection of technology for online learning. This was especially counted valid for undergraduate education. For graduate education, such concerns were less relevant, they pointed out; but the department and nature of the subject matter should have been taken into consideration carefully.

4.3.3.6 Research Question 6

What are the expectations of policy makers and administrators as to e-learning in Turkish higher education institutions? What steps should be taken to carry Turkish higher education at the expected level?

Programme Coordinator 2 pointed out the importance of 'time' in electronic learning's having its stable place in educational settings: *"You know these e's firstly emerge, and then vanish. At the beginning, they do not give what is expected, and then they become settled on slowly. I mean they made a quick start... This will also happen in the same way; I mean it will become a part of our lives. Maybe, in many schools, departments of e-learning shall be opened, and there will be departments offering courses through e-learning. Nevertheless, campus is indispensable in university education, especially at undergraduate level. We have*

prepared a proposal for undergraduate education. It is called e-campus. Our proposal there is in blended learning style. An academic year consists of four quarters. Students spend three quarters at home. They spend one quarter, summer quarter, at the campus. Thus, they do not stay away from the campus... They do those things that should be done face-to-face. We propose that e-learning, if it is to be done, should be done that way, especially at undergraduate level."

The e-campus project developed by this team proposes a model for adapting e-learning into Turkish higher education system, where it calls for a consortium of various institutions working together in cooperation and coordination to achieve a common objective.

Instructors also did not predict a pure e-learning revolution replacing the on-campus learning in the future. Instructor 3 acknowledged the undeniable existence of online learning, but considered it *"impossible to do everything through the Internet neither in near future nor in medium-term."*

Instructor 4 believed that advantages of technology in education, and of electronic learning, should have been used to the maximum extent. Reaching out to those learners in remote areas and providing them with quality education was the most important advantage of distance learning. He emphasized that the METU would not have any problem in adapting itself to such a change, since it was an innovator institution.

4.4 CROSS-CASE ANALYSIS OF INTERVIEWS AS OF RESEARCH QUESTIONS

The following part puts forward a comparison of three cases, within-case analyses of which are above, in view of the research questions stated in this study.

4.4.1 Research Question 1

What are the reasons pushing Turkish higher education institutions to go for online learning activities?

Based on respondents' statements, and expressions included in the related documents (information at the websites of the programmes, brochures, etc.), it is possible to say that the main reason to undertake an online graduate degree programme is to reach non-traditional, adult learners who cannot personally come to the campus and have their education due to several undertakings.

That the world of business demands qualified workforce with up-to-date knowledge and skills calls for retraining, and supports lifelong learning. This is valid not only for those individuals who live in metropolitans, but also others living in remote areas of the country and wishing to receive quality education for their professional life. Thus, one of the reasons behind going for online learning activities was to reach out to those individuals geographically dispersed throughout the country.

This change in demand for training of this new profile of learners has become a new challenge for higher education institutions to revise their courses and programs in order to respond to this demand efficiently (Johnson & Huff, 2000; Kang, 2001). Utilization of information and

communication technologies have assisted these institutions in their efforts to create more flexible learning environments.

"[T]he change in standards for professional education, the emergence of the adult learner as a significant percentage of student population, and the rise of computer-based technologies that offer new instructional tools" are also listed by Miller as reasons behind the shift needed to be responded by higher education institutions (1998, p.2).

This challenge has led many traditional universities to integrate electronic learning techniques into their traditional on-campus environment, due to aforementioned reasons including, but not limited to, responding to the needs of a wide range of geographically dispersed students (Özdil, 1986) with a brand new profile different than traditional students, embracing a multi-dimensional interaction opportunity between and among learners (Barkan, 1988), instructors and media, flexibility, individualisation, and cost-effectiveness. This has also been the case for three universities, which are the subjects of this study. Besides, and perhaps most importantly, all these three universities have considered it as a natural responsibility to offer online courses or programmes, as an integrated part of their missions.

Globalization and competitiveness have been two major themes that the researcher included in the provisional short list; however, none of the institutions explicitly pointed out these two concepts as the main reason to go for online learning. It has been observed that being able to fulfil educational needs of learners has been considered the major role and responsibility of higher education institutions; and this is the driving force behind such decision. Competitiveness is looked at as a secondary challenge, which can be responded to effectively with quality and sustainable training programs.

4.4.2 Research Question 2

What administrative and managerial factors are considered and steps taken for a web-based distance learning program, from respondents' perspectives?

Administrative and managerial issues seemed to show themselves as a supporting and encouraging force behind Internet-based distance education initiative, since all three initiatives were embraced by the administrations both at national and at institutional level. In fact, the units that implement these programmes were provided with maximum possible flexibility and authorization to do their job in the most efficient manner. Bates & Poole (2003) also points out that educational technology "requires a relatively sophisticated organizational support structure," and "failure... is one of the major barriers to the effective use of technology in teaching" (p.7). The organizational support that all three universities have had has facilitated their first step of such an innovative initiative with no problem.

All three programmes were assigned a Programme Coordinator, a must stated in the Regulation issued by the Council of Higher Education. Programme Coordinators were given full responsibility from the conception and planning phase to the implementation. All three Programme Coordinators have easy access to university administration, and full support of university administration for effective implementation of the programmes.

The full support of the Council of Higher Education is the common point that all three universities agreed on. The Regulation issued by the Council served as a guideline for the institutions during the planning process.

Nevertheless, none of the institutions mentioned a written document to serve as a strategy plan and/or a technology plan, which would also include future relevant activities about offering courses and programs using

Internet-based distance learning technologies. This is not the case of the subjects of this study merely. Notwithstanding with various dimensions of distance learning, studies show that university administrations do not have a clear plan for a proper management and implementation of distance learning programs in their institutions (Bothel, 2001; Miller & Padgett, 1998).

Clearly, implementation of a distance learning programme based on distinct policies set priorly is key to the success of that programme. Policy-making and accordingly strategy development will lead to make basic decisions about the goals, and tools to achieve these goals. Bates describes decision making process about technology use (1995).

> Decision making about technology ... is a complex process, requiring consideration of a great number of factors. Decision making in this area is also about personal choice, driven as much by values and beliefs as by technical considerations. These different factors cannot easily be related to one another quantitatively. In the end, an intuitive decision has to be made, but based on a careful analysis of the situation.

Nevertheless, this was not considered as a missing point of the planning process by any institution, mostly due to the full administrative support, though not written-down in a document, and flexibility provided to the team for every dimension.

4.4.3 Research Question 3

What instructional factors are considered and how instructional concerns are responded?

> Good teaching matters. Clear objectives, good structuring of learning materials, relevance to learners' needs, etc., apply to the use of any

> technology for teaching, and if these principles are ignored, then the teaching will fail, even if the unique characteristics of the medium are stylishly exploited. Good teaching may overcome a poor choice in the use of technology, but technology will never save bad teaching; usually it makes it worse (Bates quoted in Bates, 2003, p.45).

Answer to this research question, trying to reveal the instructional aspect of online learning experience of the programmes concerned, was sought through several inquiries embedded in the interviews and introductory printed or online materials for the programmes.

What participants pointed out in interviews was that all three programmes put the content into the foreground, and let the technology be utilized as an instrument to serve that content to the learners in the most effective way. The importance of pedagogical focus in electronic learning is well emphasized by Jasinski in 1998 (Quoted in Ladyshewsky, 2004):

> Technology does not cause learning. As an instructional medium, online technologies will not themselves improve or cause changes in learning. What improves learning is well-designed instruction. Online learning environments have many capabilities and the potential to widen options and opportunities available to teachers and learners. Technology is coming before pedagogy... at this stage of development, the effort put into exploring technologies to 'keep the cutting edge' is at the expense of equal investment in the underpinning of educational design (p.1).

Selection of technology is considered crucial to provide the right content to the learners in the most proper way. An educational institution is to determine its status and its objectives before selecting its technology. Frameworks in the literature developed for selection of technology serve as

a roadmap to administrators in selecting and applying the most appropriate media and technologies for learning environments.

The profile of learners in all three programmes were identical: adult learners, having a full-time job, not having opportunity for an on-campus learning experience both in terms of time and place, dispersed throughout the country, and wishing to have a chance to train themselves professionally. Thus, all institutions designed their programmes in accordance with this profile.

Faculty involvement in course preparation and content development was active and intense for all three programmes. It was told to be mainly experience-based, by all participants; and course preparation was considered to be an integral part of a whole project.

One challenge faced by faculty members during this course preparation process was that it was a time-taking one. However, instructors at Bilgi University considered it as necessary and one-time effort, since after commencement of the implementation you started to count on these initial materials, and allocate time only to update them. Interestingly, and differently than the other instructors, they valued this process as a reward since they were in the process of publishing their course materials as textbooks.

Instructional aspect of the Internet-based distance education was acutely valued by three institutions. All participants considered this process a long, burdensome, but very critical to the success of a programme. Some, as well, spoke of its added value to the normal on-campus courses they offered.

4.4.4 Research Question 4

What challenges are encountered during the planning and implementation process? How these dilemmas are overcome?

Interesting to note that none of the institutions encountered serious dilemmas during the planning and implementation process, which blockaded actualisation of the programmes concerned.

Challenges may be reviewed at different levels: technical level including technological barriers, platforms used, and technical support; instructional level including faculty's attitude, resistance or acceptance, involvement in the process; administrative level including attitude, resistance or acceptance, and support or obstruction of top- and middle-level management.

Technical side was seemed to be rather challenging among these levels, for all three of the institutions. It was, said the participants, mostly due to the fact that it was a brand new experience for them. They did not know where to start, what to do, and what platform to use to provide effective learning environment. All three universities in the scope of this study supported each other in the planning and preparation processes.

The only major challenge encountered by the institutions was the lack of know-how, and they emphasized that they learned it by doing. Anadolu University differed from other two institutions in that its collaboration with the SUNY assisted it during the planning and design process due to extensive experience of the international partner on electronic learning. Trying to do things right and being a pioneer in a brand new field needed a holistic approach to the issue, with active involvement and commitment by all parties, and all three universities were in cooperation between and among themselves in this innovative initiative.

The instructors seemed to complain about technical barriers, which did not allow them to actualise what they created in their minds as ideal.

Nevertheless, despite current improved status of the information and communication technologies, all three universities did not prefer to employ high-tech means due to the technological infrastructure throughout the country, to the profile of the learners, and to the objectives of the training programs themselves. Selection of technology was kept in close parallel with the aim of the courses, ensuring adequate interaction, feedback, communication, and motivation.

Thus, challenges at the instructional level focuses on acceptance and involvement of both faculty members and learners in the process. Dooley & Murphrey (2000) quote from Dillon & Walsh (1992), "the view of distance education as an innovation provides an important means for understanding the phenomena of distance education, particularly from the perspective of those upon whom its acceptance depends: the faculty." All three institutions mentioned about little hesitance from the faculty members' side, which was never become a major challenge or shortcoming to block implementation of the program. Instead, all interviewees praised team spirit, belief and trust among the faculty members who actively involved in these projects.

Concerns anticipated at the administrative level seemed to be not valid for any of the institutions concerned. It is possible to look at this issue at two stages: national stage, and institutional stage. At the national stage, the Council of Higher Education plays the most important role. The Council, with active participation of the academicians, one of whom is also a participant of this study as a programme coordinator, developed and issued a Regulation on Inter-University Distance Higher Education Based on Information and Communication Technologies. This Regulation puts forward principles and procedures that should be followed for opening graduate programmes offered through Internet-based distance education technologies. Programme Coordinators participated in this study mentioned about guidance and support of the Council of Higher Education during the preparation and accreditation process.

4.4.5 Research Question 5

What is needed for establishment and effective implementation of ICTs for the purposes of providing learning at a distance at higher education level?

The respondents' statements concentred around several issues, which they believed essential for establishment and effective implementation of ICTs for the purposes of providing learning at a distance at higher education level.

One of the most significantly expressed motives was readiness of both learners and instructors for an effective online learning activity. Adoption and acceptance of new information and communication technologies by faculty members was considered very important by the respondents.

Technology-equipped and innovative faculty members would be futile, stated the respondents, without learners ready and prepared for online learning. This was considered to be the case especially on the undergraduate level, where students have just been out of their secondary education without having equipped with those skills required.

Difference between certain age groups in terms of learner attitudes to instructional use of computers and the Internet, with certain association with technology literacy, is only one aspect. Concept of 'digital divide' that has come to the fore as the use of information and communication technologies has expanded throughout higher education institutions is a lot to say.

Some respondents, in this regard, praised the utilization of online tools in support of traditional courses offered by the university in its contribution to create some kind of cognisance both by instructors and by learners.

In instructional terms, to provide the learners with a flexible learning environment was specifically mentioned by one institution. However; all

institutions mentioned instructional dimension of the process several times, focusing specifically on the importance of interaction, effective communication tools, feedback, and collaboration, which have their place in Chickering and Gamson's (1991) seven characteristics of an effective learning environment with pedagogical focus .

These issues were regarded vital for commencement and initial implementation an effective distance learning programme by the respondents. However, quality and accordingly sustainability of the programmes were definitely emphasized during the interviews.

Apart from instructional dimension, two universities pointed out resistance by other departments to benefit from these units' experience on online learning, and they associated this resistance with two main concerns; namely need for financial resources, and false image of distance learning in the eyes of audience.

4.4.6 Research Question 6

What are the expectations of policy makers and administrators as to e-learning in Turkish higher education institutions? What steps should be taken to carry Turkish higher education at the expected level?

The consensus was on that the future of education would be shaped and affected by information and communication technologies, and Turkish institutions would have to be adapting themselves into that process. Emphasizing the role of electronic tools in today's world, unavoidable existence of traditional on-campus instruction at higher education was stressed. The idea that electronic learning would also change the way on-campus students learn was also praised by other respondents. It was pointed out that online learning would have a significant impact on traditional education.

In adaptation process to the advancements in information and communication technologies, instructional aspect should not be disregarded or neglected. All respondents were well aware of the fact that technology was a tool for betterment of learning. Content of instruction was considered to be the core of instruction, developed in view of the learners' needs. Negligence of content and pure commitment to the technology regardless of the learner needs and main objective of instruction would lead to failure of e-learning projects.

It was emphasized that to achieve this objective was not responsibility of merely universities. Turkey should be in this process with all relevant institutions; public, private, profit, non-profit, in close cooperation and coordination.

CHAPTER V

CONCLUSION

This chapter summarized this investigation and provides an interpretation of the outstanding findings. Conclusions supported by the findings are provided, and findings are associated with previous literature where available. Implications for future research are also provided.

5.1 SUMMARY

The purpose of this study was to provide guidance for other Turkish higher education institutions to launch and implement web-based distance education programs successfully, through an in-depth exploration of three graduate degree programs offered online by three pioneer universities in Turkey from conception to implementation.

This study, in an "attempt to make sense of, or interpret, phenomena in terms of meanings people bring to them" (Denzin & Lincoln, 1998, p.3), made use of a qualitative approach to allow for an in-depth analysis of three important and innovative initiatives launched by three significant higher education institutions in Turkey. It aimed at uncovering experiences of administrative and instructional staff working for the selected universities, in order to propose a guide for potential providers of web-based distance education in Turkey. The study used content analysis technique to gain insight into a process of conceptualizing, deciding, planning, and

implementing an online graduate degree program by three different higher education institutions.

In order to achieve the purpose of the investigation, the researcher held interviews with program coordinators, faculty implementers and instructional technology experts involved in the planning and implementation of the online graduate degree programs offered by Istanbul Bilgi University, Ankara Middle East Technical University, and Eskişehir Anadolu University. The following research questions guided the study.

1. What are the reasons pushing Turkish higher education institutions to go for online learning activities?
2. What administrative and managerial factors are considered and steps taken for a web-based distance learning program, from respondents' perspectives?
3. What instructional factors are considered and how instructional concerns are responded?
4. What challenges are encountered during the planning and implementation process? How these dilemmas are overcome?
5. What is needed for establishment and effective implementation of effective utilization of ICTs for the purposes of providing learning at a distance at higher education level?
6. What are the expectations of policy makers and administrators as to e-learning in Turkish higher education institutions? What steps should be taken to carry Turkish higher education at the expected level?

The study, based on an analysis of three currently on-going online degree programs and on relevant literature, put forward a model for Turkish

higher education institutions in their efforts to offer online courses or degree programs.

5.2 CONCLUSION OF THE STUDY: A MODEL FOR TURKISH HIGHER EDUCATION INSTITUTIONS TO REALISE E-LEARNING INITIATIVE

5.3.1 Major Outcomes of the Study

This study was designed to trace how the idea of offering an online degree program was formed, what administrative and managerial steps were taken, what cooperative and collaborative relationships were embraced, what challenges were encountered, how these challenges were overcome, what instructional factors were considered, how faculty were involved in the process, what lessons were learned, and what role was attained to e-learning in the future of higher education in Turkey.

It aimed at providing a roadmap for other Turkish higher education institutions in their attempts to launch and implement web-based distance education programs successfully.

Qualitative data collected through interviews and documentary analysis generated several findings, as reported in Chapter IV. The followings are the major outcomes of this study:

1. Online learning activities in Turkey aim to reach non-traditional, adult learners who cannot personally come to the campus due to their undertakings or to being geographically dispersed throughout the country.
2. Administrative and managerial issues are supporting and encouraging forces in case of Turkey, through provision of

maximum possible flexibility and authorization to do their job in the most efficient manner.

3. The core of instruction is learners' needs and the content. Negligence of content and pure commitment to the technology regardless of the learner needs and main objective of instruction will lead to failure of e-learning projects.

4. Lack of know-how is the major challenge encountered, which is overcome through close intra- & inter-institutional cooperation and teamwork.

5. Cooperation, collaboration and coordination between universities, as well as other relevant institutions, is key to create effective online learning environments.

6. Acceptance and readiness of both instructors and learners are essential for a successful online learning activity. Necessary measures should be taken to have them prepared for such a learning initiative.

7. Future of education will be shaped and affected by information and communication technologies, and Turkish institutions will have to be adapting themselves into that process.

8. Online learning will have a significant impact on traditional education. The future model of education will be a blended model, where proper use of information and communication technologies for instructional purposes will shape the system deciding on where to use what tools to respond to what needs.

5.3.2 Need for a Model

Outcomes obtained as a result of this study, briefed in the previous part, cannot be of good unless the institution, which would like to embrace Internet-based distance education technologies for delivery of courses or programmes, does it within a well-planned transformation period.

Bothel points out that "many distance education programs are being implemented with a vision that is not universally shared and goals that are not clearly understood" (Bothel, 2001).

Commitment at management level is key in such a transformation period. Pole (2001) stresses the importance of leadership by managers, and of coordination in order to cope with this challenge in any institution: "The Internet and networks greatly increase the size and scope of the system that leaders must cope with, and they also accelerate the pace of change within the system." Many leaders are "unprepared for what is required in dealing with today's CIT environment. Relationships at all levels are critical, and small changes can have large effects."

Each institution is a separate being, and it has its own way to cope with this challenge. It is with the effective leadership and coordination by its managers that an institution will provide its unique response as an integrated part of its history, its culture, its structure, and its beliefs (Taylor & Swannel, 2001).

This study aims to propose a roadmap to be used for Turkish higher institutions in their efforts to deliver courses/programs through online distance learning techniques, from the conception to evaluation process. The model proposed hereunder is based on the experiences of three Turkish universities, along with other national and international studies examined through a literature review.

5.3.3 A Model Proposed for Starting-Up Using Distance Learning Techniques to Deliver Courses/Programmes in Turkish Higher Education Institutions

The process recommended as a result of this study is comprised of four main phases: (A) Conception, (B) Design, (C) Implementation, and (D) Control. This four-phase process will aim to serve as a roadmap to higher education institutions that wish to employ Internet-based distance learning Technologies. The following part will explain this process phase by phase.

4. Conception Phase

This phase is for a thorough review of all circumstances behind the idea to employ distance learning technologies to deliver courses and/or programmes by a traditional higher education institution. This consideration to offer courses or degrees through Internet-based distance learning techniques is to be justifiable. The institution should be able to respond to the question 'Why?'.

The response to this question is possible by a careful and accurate enquiry of external and internal factors, leading the institution to or not to consider using distance learning techniques, which is preferably held by a committee comprised of academic and professional individuals with considerable expertise on higher education, instructional technology, information and communication technologies, and business administration.

External factors to be taken into consideration during this enquiry include, but not limited to social, economical, cultural, technological and developmental aspects. Whereas being able to respond to the ever-increasing demand for higher education in a very competitive market seems to be the main reason for an educational organization to go for intensive use of information and communication technologies for instructional purposes, it is clear that widened access to education has more critical implications for a country, investing in human capital and enabling human development.

In case of Turkey, Human Development Report 2004 indicates that "with a cautionary, caring, informed and well rounded approach, communication and Information Technologies can make substantial contributions to Turkey's human development" (p.v). However, the report warns that "Turkey's approach to policy surrounding the use of ICT within education should not therefore be driven by a need to keep pace with international developments but should be led by the need to find appropriate niches where ICT can enhance Turkey's multiple yet specific educational needs." (pp.48-49).

Consideration of internal factors is as vital as external factors, including qualified human resources, strong administrative support, teacher training, resource allocation, and technological infrastructure.

More than anything else, the institution should be ready to add up an 'e-learning' dimension to its traditional role. This readiness should be questioned in administrative, instructional, technological, and cultural terms. The institution will go into an organizational change in order to offer an effective institutionalised online learning programme. This cannot be realised without strong support and acceptance from administrators, instructors, and learners. Readiness shall be followed by commitment for resource allocation and ensuring know-how within the institution.

Only after a thorough examination of external and internal factors, and finding a valid response to the 'Why?' question, the institution is to decide whether to offer courses and/or degrees using Internet-based distance education techniques. This decision shall have its place in institution's electronic learning vision, written down on a Concept Paper.

This phase is a crucial phase of the whole process, since it is easier and less costly to go back to the start and re-consider all circumstances if there is an uncertainty or unusualness during this phase. The final document of this phase, which is the Concept Paper, is the leading document for the remaining process.

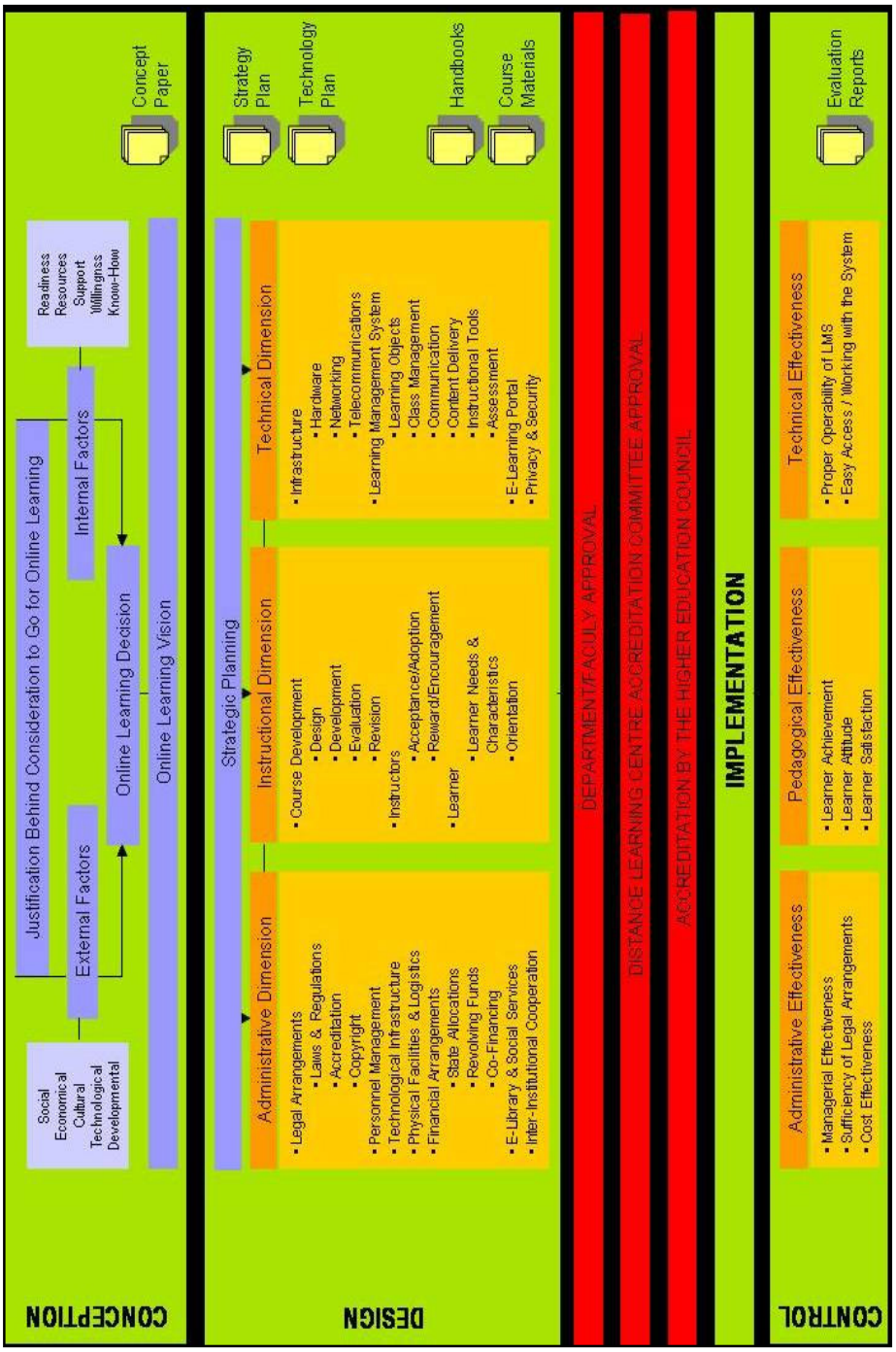


Figure 13 – A Process Model for Integrating Electronic Learning

4. Design Phase

Design phase is a three-facet phase, which is to be carried out in a close link with each other: administrative, instructional, and technical facets. These three dimensions have their sub-dimensions within themselves, each of which, on an individual basis, is to be handled with great care for effective and successful results.

Once an institutional policy is there for online learning, strategic planning is the foremost activity to be realised, which will result in determination of tools and allocation of technical, human and financial resources in order to achieve to the goals put forward in the policy made. Plans allow institutions to maximise their strengths, minimising their weaknesses (Bates, 2000). Strategy plan shall also include a technology plan, to show how technology-based courses and programmes will be delivered to learners (Bates, 2000). The strategy plan and its integrated part, the technology plan, are the first two documents that will be delivered during the design process. These two documents will serve as a guideline for further activities to be realized within this process at three dimensions.

Administrative Dimension

Administrative dimension is a good place to feel support and commitment of management level as to integration of information and communication technologies in learning environment of the institution, particularly for the aim of offering on-line courses and/or degrees. This dimension is also very important since it will establish the legal and structural basis for all relevant activities.

Legal arrangements will include a thorough review and consideration of national laws and regulations, drawing the borders inside of which the institution will realize its activities. Accreditation will be considered under this item, along with copyright and intellectual property that is among the most neglected issues in electronic learning activities though of utmost importance from instructors' viewpoint.

Institutional commitment will illustrate itself in the extent of resource allocation for the initiative taken. Resource allocation is considered in several platforms. One of them is allocation of human resources and personnel management. Realization of an online learning initiative in a conventional educational organization will require a review of personnel management policy of the institution, accompanied with adequate allocation of human resources to accomplish this initiative as anticipated.

Current physical facilities and logistics are important in terms of serving to on-line learners of the university as well as traditional on-campus learners. This is important in ensuring a sense of community to off-campus students. Widening the capabilities of existing library facilities to serve electronically as well is one of the first steps that an institution will take for its online students.

Commencing such an initiative heavily dependent upon state-of-the-art technologies, an organization is to be ready and capable to provide a technological infrastructure required for uninterrupted, reliable, safe operation of the system. Design of such an infrastructure needs a strong initial investment in every terms; especially human and financial resources.

Rational decision-making about the use of technology in education requires a proper analysis of financial factors. Distance education needs a certain amount of financing at the beginning, as in all other new investments. Quality is closely related to the amount of financing. Although system and unit costs are relatively low, fixed costs are higher. High rate of investment is needed especially at the first phase. Especially in public universities, where financial allocation is heavily dependent on state allocations, institutions have to carefully analyze and plan financial dimension of such an initiative. Besides revenues from revolving funds, amount of which will be relatively low for such and investment, co-financing should be considered as a powerful alternative as well as cooperation and partnerships with other educational organizations or private enterprises.

Katz (2001) states that "rising expectations combined with new technological capabilities and new competition will foster new forms of cooperation among traditional colleges and universities. These collaborations, too, carry with them both the potential to transform and more important, the potential to enhance higher education's role and performance in an era that will demand greater education attainment and outcomes" (pp.104-105).

Inter-institutional cooperation is not of mere importance in terms of funding. In Turkey, where initiatives for online learning are in their infancy period and also where three successful examples are being implemented, institutions are to learn from each other's experiences. Besides, not all universities' facilities and chances are equal due to socio-economic and geographical conditions. Thus, establishment of cooperation between and among higher education institutions will be another responsibility of university administrations during the design process. Besides universities, partnerships with private organizations and other educational organizations will help to cope with this challenge as well.

Distance Learning Centre

This model proposed here comes with another recommendation on establishment of a 'Distance Learning Centre'. Not all subjects are eligible for electronic learning in terms of teaching-learning principles, and not all instructors are capable of preparing and delivering their courses online…

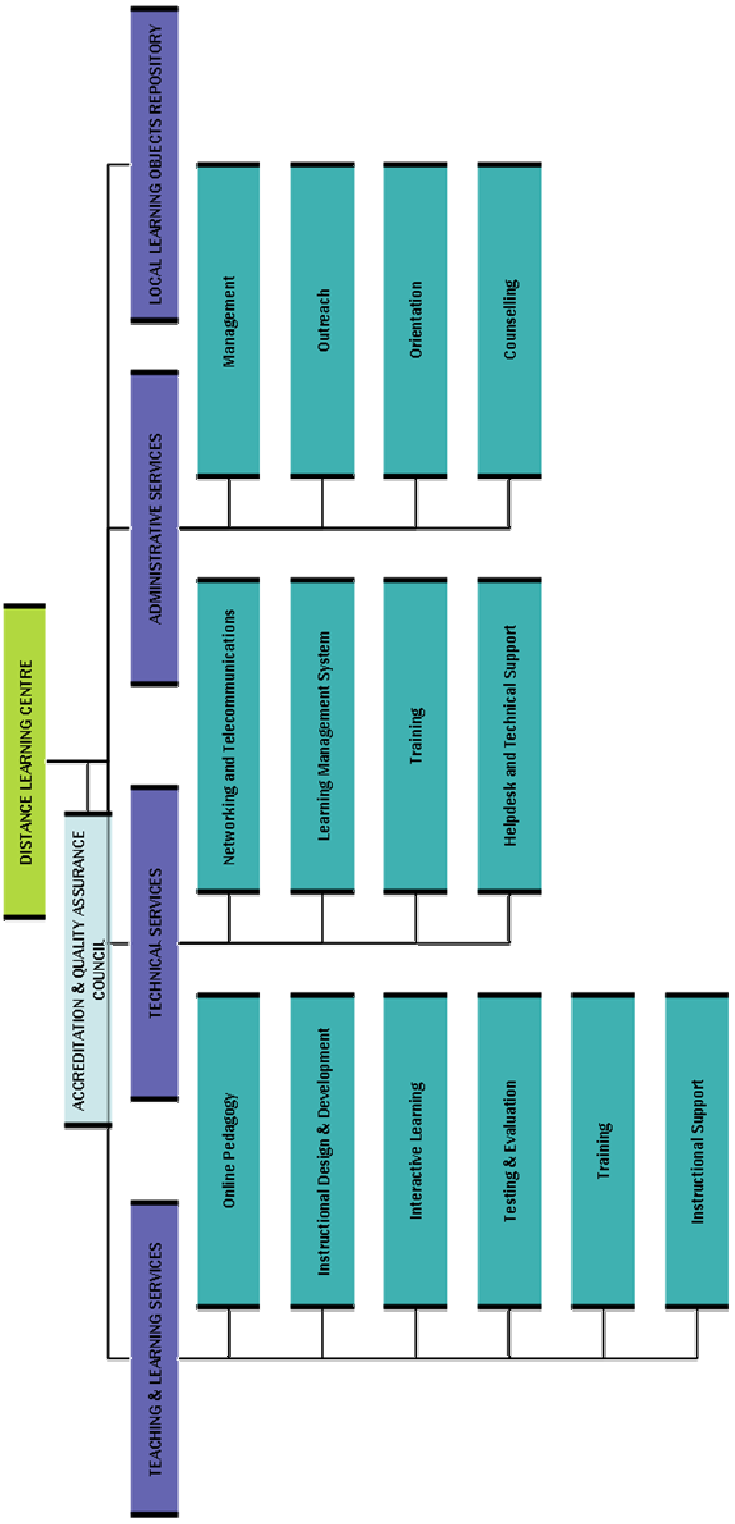


Figure 14 – Organization Chart for Distance Learning Centre

Establishment of a Distance Learning Centre is important in terms of ensuring a multi-disciplinary approach under the coordination of a body specifically established to this aim.

Reasons for establishment of a Distance Learning Centre is in parallel with those of 'learning and teaching centres,' which are considered as a way to reach excellence in education through "orientation, mentoring, peer-support, workshops, seminars, etc., attainability of which is validated by the work of Boice (1992, 2001), Travis (1995), and others" (Singer, 2002). Singer also speaks of two significant contributions of these centres: "(1) maintaining high-visibility, high-credibility, campus wide conversation focused on forward-looking learning and teaching and (2) providing quality support for all teachers, from beginning instructors to experienced, highly regarded faculty members." (p.59)

The Distance Learning Centre proposed in this model also serves as a coordinating and support body throughout the institution, specifically towards effective utilization of information and communication technologies for instructional purposes. The Centre will contribute and endorse the multi-disciplinary approach embraced by this study. The Centre not only supports departments for distance learning, but also assists them in their efforts to offer 'technology-enhanced classroom teaching' or 'distributed learning'.

Organization of the Centre is as drawn in Figure-14 above. Centre is directed by a qualified individual, appointed by the university. Under the directorate, there is an Accreditation and Quality Assurance Council, authorized and responsible for approving any module or course or programme prepared with the support of the Distance Learning Centre.

Quality assurance is "the process whereby standards are specified for a product or service and steps are taken to ensure that these standards are consistently met" (Ellis, p.17). Establishment of such a Council, not only responsible for accreditation but also of quality assurance is important, is

very important. Freeman says that "the term "quality assurance carries the implication of preventing failure. The emphasis is on 'right first time'..... and is suggestive of a pro-active process" (1991, p.26). Warren, McManus and Nnzaor (1994,4) describe it as "a continuing, active and integrative process for maintaining and improving" the delivery of program and services. Broad (1999) lists the ways to determine quality assurance as outcome-based evaluation, student feedback, appropriate technological and pedagogical support and reviews by specialists of the program and instructional materials.

Therefore, the Council is designed as an integrated part of the Centre with its permanent and ad hoc members. Each programme is represented by its Programme Coordinator, to be assigned by the relevant department owning the programme itself.

The Centre is comprised of three main units.

Administrative Services Unit is responsible for all administrative and secretariat work of the Centre. This Unit is the first contact point with other departments and university management. The Unit will be also responsible for outreach activities of online programmes. Another important function of the Unit is to orient students for online programmes, and provide counselling services to ensure they are ready to take an online class or course or programme. It provides support for online learners on such issues as selection of courses, registration conditions, and transferability of credits, accreditation and approval.

Teaching and Learning Services Unit is comprised of experts in the following areas: instructional technology, instructional design, interactive learning, testing and evaluation, course material development, and teacher training. Primary role of this Unit is to design and develop online modules/courses/programmes in parallel with the departments' needs, in a multi-disciplinary approach, with active participation of the content specialist and particularly the instructors of the concerned programme. The

Unit's another responsibility is providing in-service and/or on-the-job-training training to those instructors of the programmes to be delivered using information and communication technologies. Boh (1994) considers training of faculty members prior to the commencement of the programme as crucial as ensuring cooperation in the process as early as possible.

The other function of the Teaching and Learning Services Unit is to provide on-going support and assistance to the instructors during the implementation of the programmes.

Technical Services Unit is responsible for fulfilling all technical requirements of a course or programme to be delivered using electronic tools. Besides hardware infrastructure, networking and telecommunications, the most important function of this Unit is as regards to the learning management system to be used institution-wide. Naturally, this function of the unit is crucial if the institution goes for its first online course or programme. Decision regarding selection of a learning management system is vital, and the Distance Learning Centre is the body to advise university management whether the institution will purchase an off-the-shelf product or prefer to develop its own system. If the university goes for developing its own system, this Unit has key responsibility, with additional support from other unit and departments as necessary. The Technical Services Unit is supposed to have the capacity and qualifications to ensure proper and effective operability of the institution's learning management system, either purchased or developed. Among other issues, safeguards to protect privacy of information and security policies are crucial (Katz, 2001). The Unit also provides continuous support to instructors and learners via a helpdesk facility.

Another body part of the Centre is a Local Learning Objects Repository. In a CANARIE Discussion Paper (2002), learning object repositories are praised to allow instructors and institutions to share the cost of producing learning materials by using standardized tools and protocols.

Why establishment of such a repository is necessary in Turkey is due to the fact that online learning is in infancy period in Turkey, and not all higher education institutions are ready for such a challenge in terms of human, financial and technical resources, although utilization of information and communication technologies for instructional purposes will contribute a lot for the quality of higher education in Turkey. Establishment of a local Learning Objects Repository in each institution, which delivers courses or programmes through online distance learning technologies, enables other institutions to benefit from those course modules developed already by their colleagues. However, the establishment of such a repository attracts the attention to the issues of copyright and intellectual property, and requires a well-established operational rules in this regards. Principles as to sharing of materials stored in the repositories are to be developed and accepted at administrative level within inter-institutional cooperation framework.

Instructional and Technical Dimensions

Article 12-h of the Higher Education Act indicates that it is the higher education institutions' responsibility to produce, develop, use and expand educational technology.

Katz (2001) speaks of "an organizational culture that is team-based and multidisciplinary" (p.103). This model proposed hereunder is developed on this basis. Thus, especially during the design process, instructional and technical dimensions are realised hand-in-hand, in close collaboration, by the Distance Learning Centre and the department concerned, with support from other departments as required.

Instructional design and development process in distance learning is critical since learners and instructor interact at a distance. This process provides a systematic framework for all phases of design, development, evaluation and revision of a course, based on learner needs and requirements of the content.

Following a thorough analysis phase, course development process will be conducted via a multi-disciplinary approach, where department or faculty requesting to offer an online course or programme will work closely with the Teaching and Learning Services and Technical Services Units of the Distance Learning Centre. Figure-15 illustrates realization of any online learning operation within the system. As seen in the figure, academicians and staff of the relevant departments and the Centre conduct their studies through team working, under the coordination of a Programme Coordinator that is assigned for each programme by the relevant department. The Centre, departments and the Council will provide continuous monitoring and guidance throughout the process.

Instructional development phase is naturally in parallel with the learning management system, which is operated, maintained and sustained by the Centre. Technical dimension of the design process is an integrated part of the instructional dimension, and besides provision of technical infrastructure ranging from computer hardware to networking and telecommunications, it includes very important pedagogical significances. Selection of appropriate technology and media in accordance with the learner characteristics and content requirements is key for the success of an instructional programme.

A learning management system allows an institution to conduct its instructional interventions electronically, ranging from developing course materials to testing and evaluation. An LMS is defined by Hall (2003) as "software that automates the administration of training events. All Learning Management Systems manage the log-in of registered users, manager course catalogues, record data from learner, and provide reports to management." Privacy of the audience, along with security issues are also dealt with during this process.

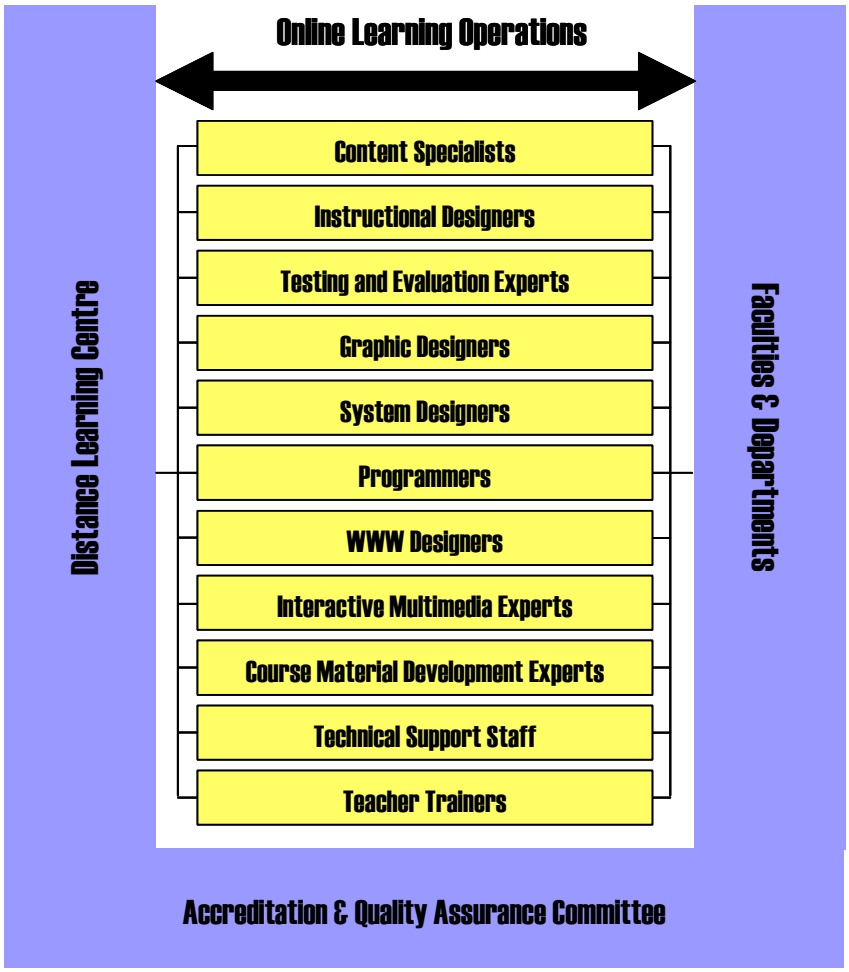


Figure 15 – Interdisciplinary Approach for Online Learning Operations

Amongst all these issues and phases, an institution is to pay special attention to its locomotives: the faculty members... An institution may be ready to start delivering its classes, courses or programmes through online learning technologies in all terms. If faculty members are not prepared, are not committed or do not believe in it at all, the initiative will possibly not give the anticipated impact, if not fail. Thus, another activity to be included in the design process is to provide the faculty members with necessary information, training, and orientation, along with possible reward and encouragement opportunities, in order for them to initially accept this initiative and to adopt it to the extent possible finally.

After the finalization of this process, besides the strategy plan and technology plan, three more documents are delivered: course materials, handbook for instructors, and handbook for learners. Finalisation of these deliverables makes the newly developed online course or programme ready to be submitted to the department and faculty concerned. Following the department/faculty approval, the course or programme is to be reviewed by the Accreditation and Quality Assurance Council of the Distance Learning Centre in order to have approval for its compliance with general instructional and technical principles. Final accreditation is of the Council of Higher Education.

3. Implementation

Approved and accredited courses or programmes are implemented with due diligence, and continuous feedback is received from instructors and learners during this process.

4. Control

This model examines the control process in three phases: administrative effectiveness, pedagogical effectiveness, and technical effectiveness.

Administrative effectiveness includes, but not limited to the evaluation of managerial effectiveness of the overall system, of sufficiency of legal arrangements, and of course the cost effectiveness of the system.

Pedagogical effectiveness is to see the impact on learner achievement, learner attitudes, and learner satisfaction. This control accordingly includes effectiveness of technology and media used in instructional process.

Technical effectiveness is directly related to proper, reliable and secure operation of the learning management system, including easy access by instructors and learners.

Evaluation reports to be delivered at the end of this process are guidelines for betterment of the overall system throughout the institution.

5.3 RECOMMENDATIONS

Based on the outcomes of this study, the followings are suggested for future research:

1. Expand this study to those institutions newly started their online programmes.
2. Conduct a study among other higher education institutions in Turkey, which have not started an online programme yet, to explore issues involved with web-based distance education.
3. Conduct a comparative study between Turkish and European institutions of higher education to explore administrative, organizational and instructional issues as to offering an online degree programme.

5.4 CONCLUSION

As discussed in this study, advancements of information and communication technologies have had a great impact on teaching-learning processes, as they have had on our daily lives. Today, especially higher education institutions are challenged to adapt themselves to these advancements in order to fulfil their mission to prepare individuals of the knowledge society.

Development of Internet and World Wide Web technologies have varied educational methods, and multiplied the means to reach a wide range of learners, regardless of time and space. It is not rational to assume that

totally virtual distance education will replace traditional education in the future. Nevertheless, it is clear that these technologies will be a part of traditional higher education, and lead to a blended model of learning, especially at the undergraduate level.

Selwyn, Marriott and Marriott (2000), as a result of their study on business students' perspectives on uses of the Internet in university, concluded that universities had to be unclouded on *why* the Internet must be integrated into the teaching-learning process, and most importantly the answer to this question must be clearly conveyed to students, as well as instructors and staff. They emphasized the fact that in order for the Internet to be utilized effectively in higher education, its significance must be "visible" to the others whereas its mediating role must be "invisible."

Bennis and Biederman (1997) in their book *Organizing Genius: The Secret of Creative Collaboration*, lack of inclusion is not only caused by anything intrinsic about the activities themselves but by unfriendly culture and poor working conditions.

A successful integration of information and communication technologies into education system, and especially successful implementation of web-based distance learning programmes are depended upon acceptance, readiness, and active involvement of administrators, instructors, and learners.

"In information-intensive environments leaders will need to use vision, technical architectures, standards, and incentives to create alignment in this relatively new and rapidly growing area of expense" (Katz, 2001, p.97)

REFERENCES

Alkan, C. (1987). *Açık öğretim: Uzaktan eğitim sistemlerinin karşılaştırmalı olarak incelenmesi*. Ankara: Ankara Üniversitesi Eğitim Fakültesi Yayınları.

Anderson, T. (2004). Toward a theory of online learning. In T.Anderson & F. Elloumi (Eds.). *Theory and practice of online learning* (pp.33-60). Athabasca, AB: Athabasca University.

Bailey, K.D. (1982). *Methods of social research* (2nd ed.). New York: The Free Press.

Barkan M. (1988). *Eğitim amaçlı iletişim ve videonun işlevleri: Anadolu üniversitesi açık öğretim fakültesinde örgütsel model önerisi*. Eskişehir: Anadolu Üniversitesi Açık Öğretim Fakültesi Yayını.

Bates, A.W. (1995). *Technology, open learning and distance education.* London: Routledge.

Bates, A.W. (2000). *Managing technological change*. San Francisco: Jossey-Bass.

Bates, A.W. & Poole, G. (2003). *Effective teaching with technology in higher education: Foundations for success.* San Francisco: Jossey-Bass.

Bates, T. (2001). *National strategies for e-learning in post-secondary education and traning*. Paris: UNESCO.

Bennis W.G. & Biederman P.W. (1998). *Organizing genius: The secret of creative collaboration*. Perseus Press.

Berg, B.L. (2004). *Qualitative research methods for social sciences*. Boston, Pearson.

Berg, G.A. (2000). Early patterns of faculty compensation for developing and teaching distance learning courses. *Journal of Asynchronous Learning Environments*, 4(1), 62-74.

Berge, Z.L. (1998). Barriers to online teaching in post-secondary institutions: Can policy changes fix it? *Online Journal of Distance Learning Administration* 1(2), Summer (On-line), http://www.westga.edu/~distance/Berge12.html

Bogdan, R.C. & Biklen, S.K. (1992). *Qualitative research for education: An introduction to theory and methods*. Boston: Allyn and Bacon.

Bothel, R. (2001). Bringing it all together. *Online Journal of Distance Learning Administration*, 4(1).

Bower, B.L. (2001). Distance education: Facing the faculty challenge. *Online Journal of Distance Learning Administration*, 4(2).

Briggs, C. (1986). *Learning how to ask: A sociolinguistic appraisal of the role of the interview in social science research*. Cambridge: Cambridge UP.

Broad, M. (1999). The dynamics of quality assurance in online distance education. *Electronic Journal of Instructional Science and Technology*. 3(1). (On-line) http://www.usq.edu.au/electpub/e-jist/docs/old/vol3no1/article2/index.htm.

Bruce, R. (1999). *Educational technology planning*. Victoria, BC: Centre for Curriculum, Transfer and Technology.

Bruder, I. (1989). Distance learning: What's holding back this boundless delivery system? *Electronic Learning*, 8(6), 30-35.

Bull, G.M., Dalinga-Hunter, C., Epelboin, Y., Frackmann, E., & Jennings, D. (1994). *Information technology: Issues for higher education management.* London: Jessica Kingsley Publishers.

Bunn, M.D. (2001). Timeless and timely issues in distance education planning. *The American Journal of Distance Education*, 15(1).

Burkman, E. (1987). Factors Affecting Utilization. In R. M. Gagne (ed.) *Instructional technology: Foundations*. Hillsdale, NJ: Lawrence Erlbaum.

Butner, B.K. (1999). Distance technology: A national graduate higher education programs. *Online Journal of Distance Learning Administration*, 2(3).

Calvani, A. & Rotta, M. (2000). *Fare formazione in internet: Manuale di didattica online*. Trento: Erickson.

Campbell D.T. & Fiske, D.W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56(2), 81-105.

Canarie. (2002). *An e-learning vision: Towards a Pan-Canadian strategy and action plan*. CANARIE Discussion Paper.

Carroll, T. (2000). If we didn't have the schools we have today-would we create the schools we have today? Keynote speech at the AACE/SITE conference, San Diego, CA.

Chickering, A.W. & Gamson, Z.F. (1991). Applying the seven principles for good practice in undergraduate education. *New Directions for Teaching and Learning.* San Francisco: Jossey-Bass. 47, 63-69.

Cohen, L., Manion, L. & Morrison, K. (2000). *Research methods in education*. London: RoutledgeFalmer.

Commonwealth of Learning. (2000). *The Development of Virtual Education: A Global Perspective*. Vancouver: COL.

Creswell, J.W. (1994). *Research design: Qualitative and quantitative approaches*. Thousand Oaks, CA: Sage.

Cuban, L. (1986). *Teachers and machines: The classroom use of technology since 1920*. NY: Teachers College Press.

Daniel, J.S. (1996). *Mega universities and knowledge media*. London: Kogan Page Ltd.

Daniel, J.S. (1997). Why universities need technology strategies. *Change*. 29(4), 11-17.

Demirli, C. (2002). *Web tabanlı öğretim uygulamalarına ilişkin öğrenci görüşleri: Fırat üniversitesi örneği*. Açık ve Uzaktan Eğitim Sempozyumu Web Sitesi: "http://aof20.anadolu.edu.tr", 23-25 Mayıs 2002, Eskişehir.

Denzin, N.K. (1978). *The research act: A theoretical introduction to sociological methods*. New York: McGraw-Hill.

Denzin, N.K. & Lincoln, Y.S. (Eds.) (1998). *Collecting and interpreting qualitative materials*. Thousand Oaks, CA: Sage Publications.

Dill, D. D. (1996). Academic planning and organizational design: Lessons from leading American universities. *Higher Education Quarterly*, 50(1), 35-53.

Dillon, C.L. & Walsh, S.M. (1992). Faculty: The neglected source in distance education. *The American Journal of Distance Education*. 6(3), 5-21.

Dohmen, G. (1967). *Das Fernstudium, Ein Neues Padogogisches Forschungs und Arbeitsfeld*, Tübingen: DIFF, Hagen, Germany.

Dooley, K.E. & Murphrey, T.P. (2000). How the perspectives of administrators, faculty, and support units impact the rate of distance education adoption. *Online Journal of Distance Learning Administration*, 3(4).

Education W. (1997). *Technology counts: Schools and reform in the information age*. Washington DC: Education Week.

Ehrmann, S.C. (1995). Asking the right questions: what does research tell us about technology and higher learning? *Change*. 27(2), 20-27.

Ellis, R. (1993). A British standard for university teaching. In R. Ellis (ed.) *Quality assurance for university teaching*. Buckingham, United Kingdom: The Society for Research into Higher Education and Open University Press.

Ely, D.P. (1999). Conditions that facilitate the implementation of educational technology innovations. *Educational Technology*. 39, 23-27.

Farquhar, J. F., & Surry, D. W. (1994). Adoption analysis: An additional tool for instructional developers. *Education and Training Technology International*, 31(1), 19-25.

Fink, A. (1995). *How to ask survey questions*. Thousand Oaks, CA: SAGE Publications.

Ford, P. (1996). *Information strategies: A UK perspective*. Proceedings of the Institutional Management in Higher Education. Paris, France, 147-155.

Forster, N. (1995). The analysis of company documentation. In C. Cassell and G. Symon (Eds.). *Qualitative methods in organizational research: A practical guide*. London: Sage.

Fraenkel, J.R. & Wallen, N.E. (1990). *How to design and evaluate research in education*. NY: McGraw Hill.

Freeman, R. (1991). Quality assurance in learning materials production. *Open Learning*, 6(3): 24-31.

Gagne, M. & Shepherd, M. (2001). Distance learning in accounting: A comparison □ehavio a distance and traditional graduate accounting class. *T.H.E. Journal*, 28(9). (On-line) http://www.thejournal.com/magazine/vault/A3433.cfm.

Garner, R. & Gillingham, M. (1996). *Internet communication in six classrooms: Conversations across time, space, and culture*. Mahwah, NJ: Erlbaum.

Garrison, D.R. & Anderson, T. (2003). *E-learning in the 21st century: A framework for research and practice.* New York: RoutledgeFarmer.

Gates, B. (1996). *The road ahead* (2nd ed.) New York: Penguin Books.

Gay, L.R. (1992). *Educational research competencies for analysis and application* (4th ed.) New York: Macmillan Publishing Co.

Gellman B. & Fetzner, M. (1998). Asking the really tough questions: policy issues for distance learning. *Online Journal of Distance Learning Administration*, 1(1).

Geoghegan, W.H. (1994). Whatever happened to instructional technology? Paper presented at the 22nd Annual Conference of the International Business Schools Computing Association (On-line) http://ike.engr.washington.edu/news/whitep/whg/wpi.htm.

Girginer, N. (2002). Uzaktan eğitime geçiş için kurumsal yapılanma. Paper presented at Open and Distance Education Symposium. (On-line) http://aof20.anadolu.edu.tr/bildiriler/Nuray_Girginer.doc.

Gladieux, L. & Swail, W. (1999). *The virtual university and educational opportunity: Issues of equity and access for the next generation*. The College Board, Washington DC.

C. Glesne & A. Peshkin (1992). *Becoming qualitative researchers.* White Plans, NY: Longman Publishing Group

Goetz, J.P. & LeCompte, M.D. (1984). *Ethnography and qualitative design in educational research*. Orlando: Academic Press.

Gold, S. (2001). A constructivist approach to online training for online teachers. *Journal of Asynchronous Learning Environments*, 5(1), 35-57.

Gooden, A. R. (1996). *Computers in classroom: How teachers and students are using technology to transform learning*. San Francisco: Jossey-Bass & Apple Press.

Grant, E.S. & France, R.B. (2000). Towards an Internet-based education model for Carribbean countries. *Journal of Educational Media*, 25(1), 21-30.

Guttman, C. (2003). *Education in and for the information society*. Paris: UNESCO.

Güvenç, Bozkurt. *History of Turkish education*. (On-line) http://www.yok.gov.tr/webeng/histedu/histtredu.html

Hache, D. (1998). Strategic planning of distance education in the age of teleinformatics. *Online Journal of Distance Learning Administration*, 1(2).

Haddad, W.D. (1994). *The dynamics of education policy making*. Washington: The World Bank.

Halasz, I.M. (1997). Cyber ed? *Corrections Today*, 59, 92-97.

Hall, B. (2003). *New technology definitions*. (On-line) http://www.brandonhall.com/public/glossary/index.htm.

Hall, G. E., & Hord, S. M. (1987). *Change in schools*. Albany, NY: SUNY Press.

Hanna, E. And Associates (2000). *Higher education in an era of digital competition: choices and challenges*. Madison, WI: Atwood Publishing.

Havice, P.A. (1999). *Attitudes and perceptions of university administrators relative to support of technology based distance learning*. Unpublished doctoral dissertation, Clemson University. Clemson.

Holmberg, B. (1982). *Recent research into distance education*. Fern Universitat, Hagen, West Germany.

Horgan, B. (1998). *Transforming higher education using information technology: First steps. Microsoft in higher education*. (On-line) http://microsoft.com/education/hed/vision.htm

Institute for Higher Education Policy. (1999). *What's the difference? A review of contemporary research on the effectiveness of distance learning in higher education*. Washington DC: Author.

Institute for Higher Education Policy. (2000). *Quality on the line: Benchmarks for success in internet-based distance education*. Washington DC: Author.

Instructional Telecommunications Council. (On-line) http://144.162.197.250/definition.htm.

İşman, A. (1998). *Uzaktan eğitim*. Sakarya: Değişim Yayınları.

İşman, A., Karslı, M.D. & Gündüz, H.B. (2002). Uzaktan eğitimin yönetimi: Bir model önerisi. Paper presented at Open and Distance Education Symposium. (On-line) http://aof20.anadolu.edu.tr/bildiriler/Aytekin_Isman3.doc.

Jacobsen D.M. (1998). *Adoption Patterns and Characteristics of Faculty Who Integrate Computer Technology for Teaching and Learning in Higher Education*. Unpublished doctoral dissertation, University of Calgary. Calgary, Alberta.

Jacobsen, D.M. (1998). Adoption patterns of faculty who integrate computer technology for teaching and learning in higher education. *Proceedings of the ED-MEDIA and ED-TELECOM 98: World Conference on Educational Multimedia and Hypermedia & World Conference on Educational Telecommunications*. Freiburg, Germany, June 20-25.

Jasinski, M. (1998). *Teaching and learning styles that facilitate online learning. Documentation project, project report*. Adelaide: Douglas Mawson Institute of TAFE.

Jeffries, M. (2001). *IPSE-Research in distance education*. (On-line) http://www.ind.net/consortium/ipse/fdhandbook/resrch.html

Johnson, M.M. & Huff, M.T. (2000). Students'use of computer-mediated communication in a distance education course. *Research on Social Work Practice*, 10(4), 519-532.

Jones, D. R. & Pritchard, A. L. (1999) Realizing the Virtual University. *Educational Technology*, 39(5), 56-59.

Katz, R.N. (2001). Changing Practices and New Frontiers. *New Directions for Higher Education*, 115, 95-107.

Keegan, D. (1996). *Foundations of distance education.* (3rd ed). New York: Routledge.

Kerlinger, F.N. (1992). *Foundations of □ehavioural research*. (3rd ed.) Orlando, FL: Harcourt Brace & Company.

Khakhar D. & Quichmayr, G. (1999). Issues in design of frameworks for ODL: Project on ODL framework for design of transnational business information systems. European Union Socrates Project, Report 2, Brussels.

Khan, B.H. (1997). *Web-based instruction*. New Jersey: Educational Publications.

King, J. W., Nugent, G. C., Eich, J., Mlinek, D. L., & Russel, E. B. (2000). A policy framework for distance education. *DEOSNEWS*, 10(10). (On-line) http://www.ed.psu.edu/acsde/deos/deosnews/deosnews.asp

Kirby, E. (1998) Administrative issues for high school distance education. *Online Journal of Distance Learning Administrations*. 1(2).

Knowles, M. (1984). *The adult learner: a neglected species* (3rd Ed.) Houston, TX: Gulf Publishing.

Knowles, M. (1984). *Andragogy in action*. San Francisco: Jossey-Bass.

Kulik, J.A. & Kulik C.C. & Cohen P.A. (1980). Effectiveness of computer-based college teaching: A meta-analysis of findings. *Review of Educational Research*. 50(4), 525-544.

Kulik, C.L. & Kulik, J.A. (1991) Effectiveness of computer based instruction: an updated analysis. *Computers in Human Behavior*. 7, 75-94.

Ladyshewsky, R.K. (2004). E-learning compared with face to face: Differences in the academic achievement of postgraduate business students. *Australasian Journal of Educational Technology*, 20(3), 316-336.

Langenberg D.N. & Spicer, D.Z. (2001). The modern campus. *New directions for higher education.* 115, 3-15.

Laurillard, D. (2002). *Rethinking university teaching: a conversational framework for the effective use of learning technologies.* London: RoutledgeFalmer.

LeCompte, M.D. & Preissle, J. (1993). *Ethnography and qualitative design in educational research* (2nd ed.). San Diego: Academic Press.

Lincoln, Y. & Guba, E. (1985). *Naturalistic inquiry*. Newburg Park, CA: Sage.

Loyd, B. H., & Gressard, C. P. (1986, Summer). Gender and amount of computer experience of teachers in staff development programs: Effects on computer attitudes and perceptions of the usefulness of computers. *AEDS Journal*, 302-311.

Marcinkiewicz, H. R. (1993/1994, Winter). Computers and teachers: Factors influencing computer use in the classroom. *Journal of Research on Computing in Education*, 26(2), 220-237.

Mathison, S. (1988). Why triangulate? *Educational Researcher*, 17(2), 13-17.

Maxwell, J.A. (1996). *Qualitative research design: An interactive approach*. California: Sage Publications.

McAlister, M. K., Rivera, J. C., & Hallam, S. F. (2001, April). Twelve important questions to answer before you offer a web based curriculum. The Online Journal of Distance Learning Administration, 4(2). (On-line) http://www.westga.edu/~distance/ojdla/summer42/mcalister42.html.

McKinsey, I. (1995). *A nation of opportunity: realizing the promise of the information superhighway. A report prepared for the National Information Infrastructure Advisory Council* (NIIAC).

Miles, M.B. & Huberman, A.M. (1984). *Qualitative data analysis*. Beverly Hills: Sage.

Miles, M.B., & Huberman, A.M. (1994).*Qualitative data analysis: An expanded sourcebook. (2nd ed.)*. Newbury Park, CA: Sage.

Miller, G.E. (2001). General education and distance education: Two channels in the new mainstream. *The Journal of General Education,* 4(50), 314-322.

Miller, M.D. & Padgett, T.C. (1998). Redesigning the learning environment for distance education: An integrative model of technologically supported learning environments. *Online Journal of Distance Learning Administration*, I(1). (On-line) http://www.westga.edu/~distance/miller11.html.

Moore, M.G. (1973). Toward a theory of independent learning and teaching. *Journal of Higher Education*. 44.

Moore, M.G. & Kearsley, G. (1996). *Distance education: A systems view*. London: Wadsworth Publishing Co.

Mueller, D. J. (1986). *Measuring social attitudes: A handbook for research and practitioners*. New York: Columbia University, Teachers College Press.

National Center for Education Statistics. (1999). *Public school teachers use of computers and the internet*. Washington DC.

National Education Association. (2000). *A Survey of Traditional and Distance Learning Higher Education Members*. Washington DC: EA.

NationsBank Montgomery Securities. (1998). *The age of knowing*. San Francisco, CA.

Noblitt, J. S. (1997). Top-down meets bottom-up. *Educom Review, 32*(3) 38-43.

Odabaşı, F. & Kaya, Z. (1998). Distance education in Turkey: Past, present and future. *Uzaktan Eğitim.* Winter.

OECD. (2000). *Education at a glance*. Paris: OECD.

Office of Higher Education. (2001). Focus on distance education. *Update*. 7,2.

Office of Technology Assessment. (1982). *Information Technology and its impact on american education*. Washington DC: Office of Technology Assessment.

Office of Technology Assessment. (1995). *Teachers and technology: making the connection*. Washington DC: Office of Technology Assessment.

Oğuz, O. (2004). Yüksek öğretim üzerine bazı tespitler ve yeniden yapılanma önerileri. *21. yüzyılda eğitim ve Türk eğitim sistemi*. İstanbul: Dem, 91-123.

Olcott, D. (1996). Destination 2000: Strategies for managing successful distance education programs. *Journal of Distance Education.* XI(2).

Özden, Y. (2000). *Eğitimde Dönüşüm: Eğitimde Yeni Değerler*. Ankara: Pegem.

Özdil, İ. (1986). *Uzaktan eğitimin çerçevesi ve Türk eğitim sisteminde uzaktan öğretimin yeri*. Eskişehir: Anadolu Üniversitesi Açık Öğretim Fakültesi Yayını.

Özgen, H., Marasli, H. & Yalçin, A. (1996). *Türkiye'de Uzaktan Egitim Için Uygulanabilir Bir Model Önerisi*. Paper presented at the Turkey First International Distance Education Symposium, 12-15 November, 1996, MONE, FRTED, Ankara, Turkey, 529-535.

Özkul, A.E. (2001). Anadolu university distance education system from emergence to 21st century. *Turkish Online Journal of Distance Education.* 2(1). (On-line) http://tojde.anadolu.edu.tr/tojde3/2/ekremtxt.htm.

Palloff R.M. & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom*. San Francisco: Jossey-Bass.

Paprzycki, M. & Vidakovic, D. (1994). Prospective Teachers' Attitudes Toward Computers. *Technology and Teacher Education Annual*, AACE, Charlottesville, VA, 74-76.

Patton, M.Q. (1980). *Qualitative evaluation methods*. Beverly Hills: Sage Publications.

Patton, M.Q. (1987). *How to use qualitative methods in evaluation*. California: Sage Publications.

Patton, M.Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage Publiations.

Peters, O. (1973) *Die Didaktische Struktur der Fernunterrichts*, Weinheim and Bassell: Beltz.

Phipps. R. & Merisotis, J. (1999). *What's the difference? A review of contemporary research on the effectiveness of distance learning in higher education*. Washington DC: The Institute for Higher Education Policy.

Picciano, A.G. (2001). *Distance learning: Making connections across virtual space and time.* Columbus: Merrill Prentice Hall.

Poley, J.K.(2001). Leadership. *New Directions for Higher Education*, 115, 83-95.

Privateer, P. (1999). Academic technology and the future of higher education: strategic paths taken and not taken. *The Journal of Higher Education*. Vol.70, No.1 (January/February 1999).

Reigeluth, C.M. (1989). Educational technology at the crossroads: New mindsets and new directions. *Educational Technology, Research and Development*. 37(1), 67-80.

Reiser, R.A. (1987). Instructional technology: a history. In R. Gagne (Ed.), *Instructional technology: Foundations*. Hillsdale: Lawrence Erlbaum.

Rither, M. & Lemke, K.A. (2000). Addressing the "seven principles for good practice in undergraduate education" with Internet-enhanced education. *Journal of Geography in Higher Education*. 24(1), 100-108.

Rogers, E.M. (1995). *Diffusion of innovations*. (4th ed.). New York: Free Press.

Rosenberg, M.J. (2001). *E-learning: Strategies for delivering knowledge in the digital age.* New York: McGraw-Hill.

Rossmann, P. (1999). *The emerging worldwide electronic university: information age global higher education*. Westport, CN: Greenwood Press.

Rossner, V., & Stockley, D. (1997). Institutional perspectives on organizing and delivering web based instruction. In B. Kahn (Ed.), *Web-based instruction* (pp. 333-336). Englewood Cliffs, NJ: Educational Technology Publications.

Russell, T. (1999). *The no significant difference phenomenon.* NC: Office of Instructional Communications North Carolina Stat University.

Sadık, A. (2003). Directions for futurresearch in on-line distance education. *Turkish Online Journal of Distance Education*, 4(4). (On-line) http://tojde.anadolu.edu.tr/tojde12/articles/sadik.htm.

Saettler, P. (1968). *A history of instructional technology*. New York: McGraw-Hill.

Savenye, W. (1998). Evaluating impact of video and web-based distance learning courses. *Proceedings of ED-MEDIA/ED-TELECOM 98, World Conference on Educational Multimedia and Hypermedia & World Conference on Educational Telecommunications*, Charlottesville, VA: Association for the Advancement of Computing in Education, 1222-1229.

Selwyn, N. (1999). Students' attitudes towards computers in sixteen to nineteen education. *Education an Information Technology*, 4(2), 129-141.

Selwyn, N., Marriott N. & Marriott, P. (2000). Net gains or net pains? Business students' use of the Internet. *Higher Education Quarterly*, 54(2), 166-186.

Sherry, L. & Gibson, D. (2000). *The path to teacher leadership in educational technology*. (On-line) http://ceo.cudenver.edu/~lorraine_sherry/ASCD2000.htm.

Sherry, L., & Morse, R. (1995). An assessment of training needs in the use of distance education for instruction. *International Journal of Educational Telecommunications*,1(1), 5-22.

Singer, S. R. (2002). Learning and teaching centers: Hubs of educational reform. In *Building Robust Learning Environments in Undergraduate Science, Technology, Engineering, and Mathematics*. J. L. Narum and K. Conover (eds), pp. 59-64, Jossey-Bass, San Francisco.

Slate, J.R., Manuel M. & Brinson, Jr K.H. (2002). The "digital divide": Hispanic college students' views of educational uses of the Internet. *Assessment and Evaluation in Higher Education*, 27(1), 75-93.

Sloman M. (2001). *The e-learning revolution: from propositions to action.* London: Chartered Institute of Personnel and Development.

Stockdill, S. H., & Morehouse, D. L. (1992). Critical factors in successful adoption of technology: A checklist of TDC findings. *Educational Technology*, 1, 57-58.

Stockly, D. (2004). Strategic planning for technological innovation in Canadian post secondary education. *Canadian Journal of Learning and Technology.* 30(2). (On-line) http://www.cjlt.ca/content/vol30.2/cjlt30-2_art-6.html.

Surry, D.W. & Farquhar, J.D. (1997) Diffusion theory and instructional technology. *Journal of Instructional Science and Technology* (2),1.

Taylor, J. & Swannel, P. (2001). An e-university for an e-world. *International Review of Research in Open and Distance Learning*. 2(1), 2-15.

Trentin, G. (1999). *La produzione collaborativa e l'apprendimento in rete. Telematica e formazione a distanza: Il caso Polaris*. Milano:FrancoAngeli.

Usun, S. (2003). Educational uses of internet in the world and Turkey: A comparative review. *Turkish Online Journal of Distance Education.* 4(3). (On-line) http://tojde.anadolu.edu.tr/tojde11/articles/usun.htm.

Uzaktan Eğitim Vakfı. (1997). *Uzaktan eğitim yaklaşımıyla ilköğretim: UZEYIL projesi için çerçeve rapor*. Ankara.

United Nations Conference on Tradeand Development. (2005). *The digital divide: ICT development indices 2004.* New York and Geneva: United Nations.

Üniversitelerarası iletişim ve bilgi teknolojilerine dayalı uzaktan öğretim yönetmeliği. 23906 S.K. Resmi Gazete 14 Aralık 1999

Verneil, M. D., & Berge, Z. L. (2000). Going online: Guidelines for faculty in higher education. *International Journal of Educational Telecommunications*, 6(3), 227-242.

Vrasidas, C., & McIsaac, M. S. (1999). Factors influencing interaction in an online course. *American Journal of Distance Education, 13*(3), 22-36.

Warren J., McManus, K. & Nnazor, R. (1994). Quality assurance and distance education: A review of the literature. In P.M. Deshpande and I. Mugridge (ed.), *Quality assurance in higher education: Papers presented to a symposium on quality assurance, New Delhi*. Vancouver: Commonwealth of Learning.

Watts, M. & D. Ebbutt (1987). More than the sum of the parts: research methods in group interviewing. *British Educational Research Journal* 13, 1:25-34.

Webb, E.J., Campbell, D.T., Schwartz, R.D., & Sechrest, L. (1966). *Unobstrusive measures*. Chicago: Rand McNally.

Web-Based Education Commission. (2000). *The power of internet for learning: Moving from promise to practice*. Washington DC.

Wenglinsky, H. (1998). *Does it compute? The relationship between educational technology and student achievement in mathematics* (Research Report). Princeton, NJ: Educational Testing Service.

Whalen, T. & Wright, D. (1999). Methodology for cost-benefit analysis of web-based tele-learning: Case study of the Bell Online Institute. *The American Journal of Distance Education*. 13(1), 22-24.

World Bank. (1999). *World Development Report 1998/99: Knowledge for Development*. New York: Oxford UP.

World Bank. (2000). *Higher education in developing countries: Peril and promise*. Published for the Task Force on Higher Education and Society.

Yazıcı, A., Altaş, İ. & Demiray, U. (2001). Distance education on the net: A model for developing countries. *Turkish Online Journal of Distance Education.* 2(2). (On-line) http://tojde.anadolu.edu.tr/tojde4/aiutext.html.

Yildirim, A. & Simsek, H. (1999). *Sosyal bilimlerde nitel araştırma yöntemleri*. Ankara: Seckin.

Yildirim, İ. S. (1997) *Effects of an educational computing course on pre-service and in-service teachers' attitudes toward computers.* Unpublished doctoral dissertation, University of Southern California. Los Angeles.

Yin, R. (1994). *Case study research: Design and methods* (2nd ed.). Thousand Oaks , CA : Sage.

Yükseköğretim Kurulu (2004). *Türk Yüksek Öğretiminin Bugünkü Durumu*. (On-line) http://www.yok.gov.tr/egitim/raporlar/raporlar.htm

Yükseköğretim Kurulu (2004). *Towards the European higher education area: Bologna process*. (On-line) http://www.yok.gov.tr/duyuru/bolonya_sureci.doc

Zhao Y. & Cziko, G. (2001). Teacher adoption of technology: A perceptual control theory perspective. *Journal of Technology and Teacher Education*, 9(1), 5-30.

Zlomistic, S. & Bates, T. (1999). Assessing the cost and benefits of technology: A case study from the University of British Columbia. *NCE-Telelearning*. (On-line) http://det.cstudies.ubc.ca/detsite/framewat-index.html.

APPENDIX A

INTERVIEW GUIDES

REKTÖR YARDIMCILARI İLE GÖRÜŞME REHBERİ

Başında olduğunuz kurum, Türkiye'de Internet üzerinden yüksek lisans derecesi veren üç üniversiteden biri… Üniversitenizin bu yenilikçi inisiyatifi hayata geçirmesine neler neden oldu?

Dış dünyada süregelen değişimler

Teknolojik gelişmeler ve değişmeler

Değişen öğrenci profile

İdari açıdan baktığınızda, planlama ve hazırlık sürecini nasıl geçirdiniz?

İzinler

Maliyet/finansman

Kalifiye personelin varlığı

Teknik altyapı (ağ, donanım, yazılım, vb.)

Planlama ve yürütme sürecinde karşılaştığınız problemler veya engeller var mıydı? Varsa, nelerdi?

Akreditasyon ve sertifikalandırma konularında neler yaptınız?

Bu programdan ayrı olarak, lisans ve yüksek lisans seviyesindeki diğer dersler için kullandığınız ders yönetim sistemi var mı? Varsa, kendi imkanlarınızla mı geliştirdiniz yoksa varolan bir sistemi kendi ihtiyaçlarınıza göre adapte mi ettiniz? Yoksa böyle bir sistemi hayata geçirmeyi düşünüyor musunuz?

Üniversitede görev yapan öğretim üyelerine ve öğrencilere, bilgi ve iletişim teknolojileri anlamında bir teknik destek sağlanıyor mu?

Bu programın hayata geçirilmesi, üniversitenin örgütsel bir değişim geçirmesine neden oldu mu? Üniversitede, e-öğrenmeye yönelik merkezi/kurumsal bir yaklaşım söz konusu mudur?

Üniversitenin, yazılı, resmi bir teknoloji entegrasyon politikası veya stratejisi var mı?

Nasıl yazıldı?

Niye yazıldı?

Politikada çevrimiçi öğrenmenin rolü nedir?

Yazıldıktan sonra, uygulama esnasında değişime uğradı mı?

Stratejinizde bilgi ve iletişim teknolojileri ile ilgili önceliklerniz nelerdir? Bu öncelikleri nasıl gerçekleştirmeyi düşünüyorsunuz?

Internet üzerinden uzaktan eğitim programlarının etkin olarak yürütülmesi için hükümet desteğine ihtiyacınız var mı?

Başlatmış olduğunuz bu inisiyatifin herhangi bir etkisini gözlemleme şansınız oldu mu?

Yüksek öğretim düzeyinde Internet üzerinden uzaktan eğitimin geleceğine baktığınızda, aklınızda nasıl bir senaryo beliriyor?

INTERVIEW GUIDE FOR VICE RECTORS

Your institution is one of the six offering a fully online degree/certificate in Turkey. What triggers have driven you to start this innovative activity?

Changes in the external environment

Recent technological developments

Changing profile of learners

How has the planning/preparation process been handled at the administrative side?

Permissions

Cost/special funding

Existence of qualified staff

Technical infrastructure (networking, hardware, software, etc.)

What were the barriers/problems you experienced both during planning and implementation process?

How did you deal with accreditation and certification issues?

Apart from this program, does your institution host any other course management systems for other courses offered both undergraduate and graduate level?

Do you provide any institutional support for instructors/students to adapt themselves to the new ICTs?

So, have you been through a process of organizational change? Does your institution have a centralized, institutional approach for e-learning delivery?

Does your institution have a written, formal technology integration policy or strategy?

How was it written?

Why was it written?

What is the role of online learning in it?

Was it revised upon implementation?

What are the IT priorities in your strategy, and how do you communicate these priorities?

Do you need some kind of national support for proper/effective implementation of e-learning?

Have you been able to witness any impact of this initiative?

What is the scenario in your mind, when you look at the future of online learning at higher education level?

PROGRAM KOORDİNATÖRLERİ İLE GÖRÜŞME REHBERİ

Internet üzerinden yüksek lisans derecesi verme fikri nasıl ortaya çıktı?

Neden ilk uygulama olarak bu alanı seçtiniz? Sizce hangi alanlar, e-öğrenme için daha uygun? Üniversitenizdeki e-öğrenme etkinliklerinin belirli fakülteler veya bölümlerle sınırlanması ile ilgili görüşleriniz nelerdir?

Yürüttüğünüz projeye geri dönersek, planlana ve hazırlık süreci zor muydu? İdari, mali veya öğretimsel anlamda herhangi bir güçlükle veya engelle karşılaştınız mı?

Öğretim üyelerinin, Internet üzerinden ders verme ile ilgili tavırları ve düşünceleri nelerdi?

Dersin verilmesi esnasında herhangi bir problemle karşılaştılar mı? Program hayata geçmeden önce, herhangi bir hizmetiçi eğitim imkanı verildi mi?

Bu projede yer alan öğretim üyeleri, öğretimsel amaçlı teknoloji kullanımı konusunda tedirgin olan veya geri planda kalmayı tercih eden diğer öğretim üyeleri için yönlendirici oldular mı?

Programın, öğretme-öğrenme çıktıları anlamında bir etki değerlendirmesi yapıldı mı?

Yüksek öğretim düzeyinde Internet üzerinden uzaktan eğitimin geleceğine baktığınızda, aklınızda nasıl bir senaryo beliriyor?

Üniversitenizin böyle bir değişime kendini nasıl adapte edeceğini düşünüyorsunuz?

E-öğrenmenin, üniversitenizdeki öğretme-öğrenme faaliyetlerini nasıl etkileyeceğinizi düşünüyorsunuz?

INTERVIEW GUIDE FOR PROJECT COORDINATORS

How has the idea of offering an online course emerged?

Why did you choose the area of that subject at the first place? What programs are best suited to e-learning?

What do you think about that the e-learning activities shall concentrate on particular faculties/departments in your institution? Why?

Coming back to the ongoing Project, was the planning and preparation process difficult? Have you encountered any problems or barriers in administrative, financial or instructional terms?

What was the attitude of the faculty to offering of an online course within the university?

Have online instructors experienced problems while offering the course? Have you provided any training activity for them prior to effectiveness of the course?

Do you think this has been an incentive for other faculty who is hesitant to use technology for instructional purposes?

Have you evaluated the impact of the courses offered online on teaching/learning outcomes?

What is the scenario in your mind, when you look at the future of online learning at higher education level?

How do you think your institution is going to adapt itself to such development?

How do you think e-learning is going to affect teaching and learning in your institution?

ÖĞRETİM ÜYELERİ İLE GÖRÜŞME REHBERİ

Bilgi ve iletişim teknolojilerinin öğretme-öğrenme amaçlı kullanımına başlamanıza hangi faktörler sebep oldu?

Pedagojik faktörler

Öğrenci talepleri

İdari yönlendirme

Internet üzerinden yüksek lisans derecesi verme fikri nasıl ortaya çıktı?

Dersi verirken bir problemle karşılaştınız mı?

Bu girişimde üniversite sizi destekledi mi?

Program hayata geçmeden önce herhangi bir hizmetiçi eğitim faaliyetine alındınız mı?

Sürekli teknik destek sağlanıyor mu?

Böylesine yenilikçi bir girişimin diğer öğretim üyelerince benimsenmesi ile ilgili düşünceleriniz nelerdir? Bunun, öğretimsel amaçlı teknoloji kullanımı konusunda tedirgin olan veya geri planda kalmayı tercih eden diğer öğretim üyeleri için yönlendirici olduğunu düşünüyor musunuz?

Programın, öğretme-öğrenme çıktıları anlamında bir etki değerlendirmesi yapıldı mı?

Yüksek öğretim düzeyinde Internet üzerinden uzaktan eğitimin geleceğine baktığınızda, aklınızda nasıl bir senaryo beliriyor?

Üniversitenizin böyle bir değişime kendini nasıl adapte edeceğini düşünüyorsunuz?

E-öğrenmenin, üniversitenizdeki öğretme-öğrenme faaliyetlerini nasıl etkileyeceğinizi düşünüyorsunuz?

INTERVIEW GUIDE FOR FACULTY MEMBERS

What factors have led you to start using advanced ICTs for teaching/learning purposes?

Pedagogical challenges

Student requests

Administrative persuasion

How has the idea of offering an online course emerged?

Have you experienced problems while offering the course?

Does the university support you, as online instructors, in this initiative?

Have you been provided with any training activity priorly?

Are you provided with continuous technical support?

What do you think about acceptance of such an innovative initiative by the other faculty? Do you think this has been an incentive for other faculty who is hesitant to use technology for instructional purposes?

Have you evaluated the impact of the courses offered online on teaching/learning outcomes?

What is the scenario in your mind, when you look at the future of online learning at higher education level?

How do you think your institution is going to adapt itself to such development?

How do you think e-learning is going to affect teaching and learning in your institution?

APPENDIX B

LETTER OF INVITATION TO PARTICIPATE

Kasım ...., 2004

Sayın _____,

Orta Doğu Teknik Üniversitesi Eğitim Fakültesi Bilgisayar Eğitimi ve Öğretim Teknolojileri Bölümü'nde doktora öğrencisiyim. Web tabanlı uzaktan eğitim uygulamaları üzerine yürütmekte olduğum tez çalışması için, sizin ve kurumunuzun bu çalışmanın bir parçası olmanız beni memnun edecektir.

Çalışmam, uzaktan eğitim alanında Türkiye'deki üç öncü üniversite olan Anadolu Üniversitesi, İstanbul Bilgi Üniversitesi ve Orta Doğu Teknik Üniversitesi tarafından web tabanlı uzaktan eğitim yöntemiyle verilmekte olan yüksek lisans programlarının ayrıntılı analizi üzerine odaklanmaktadır. Çalışmanın kapsamı, bu programların fikir aşamasından uygulama aşamasına kadar olan sürecini içermektedir. Çalışmamın sonunda, öğretimsel dağıtım yöntemlerini çoğaltarak, web tabanlı uzaktan eğitim programlarını da uygulamaları içerisine katmak isteyen Türkiye'deki diğer yüksek öğretim kurumlarına yol gösterecek bir yol haritası oluşturmayı hedeflemekteyim.

Nitel olarak sürdüreceğim çalışma, kurum yöneticileri ve program koordinatörleri ile yapılacak bireysel görüşmeleri, söz konusu eğitim programlarında görev yapan öğretim üyeleri ile yapılacak grup görüşmelerini ve belge incelemelerini kapsamaktadır.

Çalışmama katılmayı kabul etmeniz halinde, yapacağımız görüşmede, web tabanlı uzaktan eğitim yöntemiyle kurumunuz tarafından

sunulmakta olan yüksek lisans programı ile ilgili bazı sorulara cevap arayacağım. Görüşmede, sizin de içinde yer aldığınız bu süreç ile ilgili deneyimleriniz ve görüşleriniz çalışmama ışık tutacaktır. Katılımınız ile ilgili onayınızı aldıktan sonar, sizin programınıza uygun bir görüşme tarihi belirlenecektir.

Bu çalışmaya katılım, gönüllülük esasına göredir. Görüşme sırasında edinilen tüm bilgiler gizli tutulacak ve çalışmada sizin yanıtlarınızı tanımlayıcı hiçbir öğe bulunmayacaktır.

Çalışmayla ilgili herhangi bir sorunuz olursa, benimle veya tez danışmanım Dr. Soner Yıldırım (Orta Doğu Teknik Üniversitesi, Tel: (312) 210 4057, E-posta: soner@metu.edu.tr) ile bağlantıya geçebilirsiniz.

Çalışmamda yer almak isterseniz, görüşme için uygun bir tarih ayarlamak için sizi telefonla arayacağım. Şu anda yürütmekte olduğunuz program ile ilgili yönetmelik, kurum içi yazışmalar, politika/strateji raporları ve kararlar gibi bir takım belgeleri benimle paylaşırsanız çok memnun olacağım.

Desteğiniz ve zaman ayırdığınız için şimdiden teşekkür ederim.

Saygılarımla,

Müge Nişancı

November ...., 2004

Dear _____,

I am a Doctoral Candidate at the Middle East Technical University, and I invite your institution and yourself to become a part of this study on web-based distance education for my dissertation.

My study focuses on in-depth analysis of three graduate degree programs offered online by three pioneer universities in Turkey, namely Anadolu University, Istanbul Bilgi University, and Middle East Technical University, from conception to implementation, to provide guidance for other Turkish higher education institutions to launch and implement web-based distance education programs successfully. It finally aims to put forward a guide for Turkish universities in their potential efforts to vary their instructional delivery methods and to take a step forward to the world of online education.

The study will include individual interviews with administrators, group interviews with faculty implementors, and documentary review in order to make an in-depth analysis of the process concerned.

If you agree to participate, I will ask you to answer questions about your involvement with the online degree program offered by your institution. I will request you to share your experiences and your opinions about the process you have been through with. An interview will be scheduled with you at a time convenient to your agenda, and I will request your permission to audio tape the interview.

Participation in this study is voluntary, all information will be kept confidential, and there will be no identifying factor as to your responses in my notes or my dissertation.

If you have any questions about this study, please contact me or my dissertation advisor, Dr. Soner Yildirim, at the Middle East Technical University, phone number (312) 210 4057, e-mail soner@metu.edu.tr.

I will call you to arrange for a convenient time to meet, if you decide to take part in my study. I will appreciate your sharing with me any documentation pertaining to the web-based distance learning program your are implementing, such as regulations, office memos, policy/strategy papers, decisions, etc.

Thank you in advance for all your help and time.

Best regards,

Muge Nisanci

CURRICULUM VITAE

PERSONAL INFORMATION

Surname, Name: Nişancı, Müge
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EDUCATION

Degree	Institution	Year of Graduation
MA	Hacettepe University English Language and Literature	1995
BA	Hacettepe University English Language and Literature	1992
High School Diploma	Şehit Mehmet Gönenç Lisesi, Bandırma	1987

WORK EXPERIENCE

Year	Place	Enrollment
2001-Present	General Directorate of Social Assistance and Solidarity of the Turkish Prime Ministry	CCT Coordinator of the Social Risk Mitigation Project
2000-2001	Ministry of National Education	Advisor to the Deputy Undersecretary
1998-2000	Ministry of National Education	Head, IT Unit of the Basic Education Project
1996-1998	Ministry of National Education	Education Specialist, Projects Coordination Unit
1993-1996	Ministry of National Education	Interpreter, Projects Coordination Unit
1992-1993	Ankara Hotel and Tourism High School	English Teacher

FOREIGN LANGUAGES

Advanced English, Italian

PUBLICATIONS

Nisanci, M. (2000). Instructional software evaluation criteria used by the teachers: Implications from theory to practice. *Society for Information Technology and Teacher Education International Conference 2000*(1), 1548-1552. [Online]. Available: http://dl.aace.org/721

HOBBIES

Music, Languages, Books, Swimming