AN INVESTIGATION OF INCENTIVES, BARRIERS AND VALUES ABOUT
THE OER MOVEMENT IN TURKISH UNIVERSITIES: IMPLICATIONS FOR
POLICY FRAMEWORK

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ABSTRACT

AN INVESTIGATION OF INCENTIVES, BARRIERS AND VALUES ABOUT THE OER MOVEMENT IN TURKISH UNIVERSITIES: IMPLICATIONS FOR POLICY FRAMEWORK

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The main purpose of this dissertation study is to provide policymakers, administrators, decision makers and key stakeholders in higher education with a research-based guidance about the Open Educational Resources (OER) movement in Turkey. More specifically, this study aims at determining main incentives and barriers for freely publishing course materials in Turkish Universities from faculty members' perspective and determine perceived values of sharing course materials for faculty. In line with these aims, present study also aims to understand experience of pioneer OER initiatives in Turkey. Considering all these aims, results are expected to shed light on policies intended to be developed about OER movement in the scope of this study. In this sense, a multimethod research design, a quantitative methodology (survey research design) and qualitative methodology (multiple-case research design), each complete in itself and addressing different research questions of the study, was performed. In the scope of the quantitative part of the study, an instrument developed and administered to faculty members from 57 universities in Turkey. In total, there were 1637 complete responses from faculty members. For qualitative part of the study, on the other hand, three pioneer OER initiatives in Turkey were investigated. Results of the survey showed that faculty members have a strong consensus on possible benefits of OER movement and majority of them want to publish their course materials. However, what they say is different than what do

in practice. That is, one of the most significant challenges that three initiatives investigated in this study confronted is to persuade faculty members to share their course materials. In this point, legal issues appear to be the most concerned issues by faculty members. Besides convincing faculty members, there are also a number of challenges that these initiatives confronted. To address those challenges, results showed that integrating this movement into working system of institutions, establishing a dedicated unit, and personal relationships are seem to be best working strategies during the implementation of these kinds of initiatives

ÖZ

AEK HAREKETİNİN TEŞVİKLER, ENGELLER VE FAYDALAR BAKIMINDAN TÜRKİYE'DEKİ ÜNİVERSİTELERDE ARAŞTIRILMASI: POLİTİKA ÇERÇEVESİ OLUŞTURMAYA YÖNELİK ÖNERİLER

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Bu tez çalışmasının genel amacı; yüksek öğretim kurumlarındaki politika yapıcılar, yöneticiler, karar vericiler ve paydaşlara yönelik, araştırma tabanlı Açık Eğitim Kaynakları (AEK) hareketi konusunda bir yol haritası sunmaktır. Daha özelde ise, bu çalışma, Türkiye'de bulunan üniversitelerdeki ders kaynaklarının paylaşımını teşvik edici ve engelleyici temel unsurları ve ders materyallerinin paylaşımının sağlayacağı potansiyel faydaları, öğretim üyelerinin bakış açılarıyla belirlemeyi amaçlamıştır. Bunların yanısıra, bu çalışmanın bir diğer amacı da Türkiye'deki öncü üç AEK hareketinin deneyimlerini, karşılaştıkları zorluklar ve uyguladıkları stratejiler yönünden ele alarak, ortaya çıkarmaktır. Tüm bu amaçlar doğrultusunda, elde edilen bulguların bu çalışma kapsamında geliştirilen AEK hareketi konusundaki politikaları aydınlatacağı beklenmektedir. Bu bağlamda, nicel (anket araştırma yöntemi) ve nitel (çoklu durum deseni) araştırmaların kendi içinde bir bütünlük oluşturduğu ve farklı araştırma sorularına cevap verdiği, bir araştırma yöntemi olan çoklu yöntem (multimethod) araştırma yaklaşımı kullanılmıştır. Çalışmanın nicel araştırma yöntemi için bir ölçek geliştirilip, Türkiye'deki 57 üniversitede der veren öğretim elemanlarına uygulanmıştır. Toplamda 1637 öğretim elemanı anketin tamamını cevaplamıştır. Calışmanın ikinci ayağı olan nitel bölümde ise, Türkiye'de hizmet veren üç öncü AEK teşebbüsü incelenmiştir. Sonuçlar göstermektedir ki, öğretim elemanları AEK hareketinin sağlayacağı potansiyel faydalar konusuda güçlü

bir ortak görüş içindedirler ve ders kaynaklarını paylaşmak istemektedirler. Ancak, söylenenler ile uygulamada yapılanlar arasında bir farklılık olduğu görülmüştür. Öyleki, araştırma kapsamında incelenen üç AEK teşebbüsünün de karşılaştığı en ciddi zorluğun öğretim üyelerini ders kaynaklarını açmaya ikna etmek olduğu görülmüştür. Bu noktada, yasal hususlar, öğretim elemanları tarafından en çok kaygı duyulan konuların başında gelmektedir. Öğretim üyelerini ikna etmenin yanısıra, uygulayıcılar bir çok zorlukla da karşılaşmaktadırlar. Karşılaşılan problemlerin önüne geçmede ise, uygulayıcıların deneyimleri bu hareketi ünversitenin işleyen yapısı içerisine entegre etmenin, bu harekete özgü bir birimin kurulmasının, ve öğretim elemanları ile gerçekletirilen kişisel ilişkilerin kendi bağlamlarında en iyi çalışan stratejiler olduğunu göstermektedir.

Anahtar Kelimeler: Açık Eğitim Kaynakları (AEK), Açık Ders Malzemeleri (ADM), AEK engeller ve teşvikler, AEK zorluklar ve stratejiler

The Loved One

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LIST OF ABBREVIARATION

ACE:	Awards for OpenCourseWare Excellence
ANKADEM:	Ankara University OpenCourseWare Initiative
ANKUZEM:	Ankara University's Distance Education Centre
CC:	Creative Commons
CMS:	Content Management System
DPT:	The State Planning Organization
EU:	The European Union
HUADM:	Hacettepe University OpenCourseWare Initiative
ICT:	Information and Communication Technologies
IPR:	Intellectual Property Rights
ITS:	Instructional Technology Support Office
MEB:	Ministry of National Education
METU:	Middle East Technical University
MIT:	Massachusetts Institute of Technology
OCW:	OpenCourseWare
OECD:	Organization for Economic Co-operation and Development
OER:	Open Educational Resources
ÖSYM	Student Selection and Placement Center
TÜBA:	Turkish Academy of Sciences
TÜBİTAK:	The Scientific and Technological Research Council of Turkey
UADMK:	National OpenCourseWare Consortium

UBTYS:	National Science, Technology and Innovation Strategy
ULAKBİM:	The Turkish Academic Network and Information Centre
UNECSO:	United Nations, Educational, Scientific and Cultural Organization
YÖK:	The Council of Higher Education
B2S1	Section 2 Question 1 (Bölüm 2 Soru 1)

CHAPTER 1

INTRODUCTION

"He who receives ideas from me, receives instruction him-selves without lessing myself; as he who light his taper at mine receives light without darkening me"

Thomas Jefferson

1.1 Introduction

This section presents background of the study, problem statement, purpose and significance of the study considering the research and the practice in the area of Open Educational Resources. It also reports the description of the main terms used in the study. Open Educational Resources (OER) Movement

As being one of the initiatives resulting from the progression of Information and Communication Technologies (ICT), the Open Educational Resources (OER) movement has expanded during the last decade (Sclater, 2010; Hilton III, Wiley, Stein & Johnson, 2010; Conole & McAndrew, 2010; Schaffert & Geser, 2008). This movement has been welcomed by a number of significant international organizations such as UNESCO, OECD, The World Bank, The European Union and The Commonwealth of Learning (Taylor, 2007). The exact number of the OER initiatives around the world is currently not known. However, the increase in the number of institutions participating OER movement, number of people involved and the number of Open Educational Research projects (TESSA, OPAL, OLnet, OLCOS, and OER Africa) initiated in recent years are three important indicators of this growing interest (OECD, 2007).

The Massachusetts Institute of Technology (MIT) OpenCourseWare (OCW) initiative is one of the various models for providing free-to-use OER (Carson, 2007).

It played an important role in instigating the OER movement around the World (Atkins, Brown & Hammond, 2007; Sclater, 2010; Smith, 2009). Although it was not the first OER initiative, it was the first large-scale initiative which published almost all of the MIT's undergraduate and graduate course' materials on the Internet for free.

1.1.1 OER Movement in Turkish Higher Education

The significant impact of OER movement has been seen in Turkish Tertiary Institutions with the establishment of the Turkish OpenCourseWare consortium (UADMK) with the leadership of Turkish Academy of Sciences (TÜBA). The Turkish OCW consortium was formed in October 2006 with twenty–four university in the leadership of TÜBA (Yazici, Ozkul & Cagiltay, 2008). The number of universities in the Turkish OCW consortium has since increased to fifty-seven as of June, 2011. In addition to that, in the State Planning Organization's (DPT) 2006-2010 Information Society Action Plan (2009), OER movement has been indicated as a priority action under the action number 89 (DPT, 2009, p.29). In 2009, DPT provided a grant for two-year pilot OER project with the leadership of the Turkish OCW Consortium. In the first year of the project (2010), courses from natural and applied sciences were developed. In the second year, courses from social sciences will be translated to Turkish from other OER initiatives and new courses will be developed in the scope of this project. As of July 2011, OER movement is also included in the 2011 Action Plan for the National Science, Technology and Innovation Strategy (UBTYS) 2011-2016 under the strategic purpose Y1.2.1 (UBTYS, 2011). Interest for OER is growing in Turkey with the help of institutions like TÜBA, DPT, and The Scientific and Technological Research Council of Turkey (TÜBİTAK). Further information about OER movement in Turkey is presented in the literature review section.

OER movement holds great potentials (Vukovic & Martin, 2009; Conole & McAndrew, 2010) for different stakeholders such as educators, students, self-learners, and governments. Some of these potentials are;

- Educators around the globe may upgrade their courses or they can use the materials as models for their own teaching. They may also use the materials for their own learning;

- Students can use OER as a supplementary resource for their lessons or to follow self-study;

- University students may get an idea about which courses to sign up for

- It can offers life-long learning opportunities

This list can be expanded; however, OER is especially important in Turkish context for a number of reasons. Some of these reasons were explained in the following section.

1.2 Background of the Study

In this part, problems that directed the researchers to conduct this study and how OER movement can address to those problems were presented.

1.2.1 Lack of Turkish Digital Resources in the Age of Knowledge Society

When we compare English digital resources on the Internet with Turkish digital resources, it is clear that Turkish resources are considerably limited. For example, in their studies about information search behavior on the Internet, Yalcinalp and Askar (2003) found that there is a desperate need for web sites which include rich resources in Turkish language. There is little doubt that we are living in a new age, which is generally called as knowledge society. In this age, knowledge becomes one of the most important powers in global competition. Digital content, on the other side, can be regarded as prerequisite for knowledge societies. Thus, increasing quality and amount of the digital content is utmost important for the societies. As reported by Schaffert and Geser (2008) "OER are understood to be an important element of policies that want to leverage education and lifelong learning for the knowledge society and economy" (p.2). In this sense, it would be argue that the OER movement can offer a fast, reliable and cost-effective way of increasing Turkish digital resources on the Internet. It is fast because existing digital resources can be used as an OER. It is estimated that many of the Turkish faculty members' course materials are ready to be used as OER, but they are locked behind password-

protected systems. The finding of this study is also showed that majority of faculty members has their course materials in digital format. Hence, transforming those resources into OER sometimes requires just one click. These course materials have to satisfy some level of quality because faculty members have already been using these digital resources in their courses. They are the experts of related fields. Even most of them dedicated many years to their own fields. Therefore, it is likely that reliability and quality of those resources would be high (Mestre, 2009). Finally, it is cost-effective way since sharing and reusing make the costs for content development decreased and enabling better use of available resources (Caswell, Henson, Jensen, & Wiley, 2008; OECD, 2007). Stacey (2011) claims that OER movement leverage taxpayer's money since state universities are public institutions supported by taxes paid by citizen. Also because of unique nature of the digital content, it is easy to copy and distribute content across a wide range of network. Considering all these points, OER movement could be one of the best ways of increasing amount of Turkish digital content in the age of knowledge society.

1.2.2 Problems in Current Turkish Higher Educational System

Though important progress has been achieved worldwide to benefit from new technologies, as acknowledged in the strategic plan of the Turkish Higher Education Council (YÖK, 2007, p.189), it is difficult to see this development on the Turkish higher education system sufficiently. In the report, it is pointed out that

> *Old instructional techniques are dominant in Turkish higher education. Teaching methods based on lecture notes prepared by using limited number of educational resources or making student take notes are widely used in higher education institutions (p.189).*

As presented in the YÖK's strategic report, educational resources are scarce or difficult to access especially in new universities. Moreover, old instructional techniques have still been widely used in courses. The report draws attention to such initiatives as MIT-OCW to support teaching and learning activities in tertiary education. Also in the report, it is underlined that there should be a change from instructor-centered approach to student-centered approach. In this sense, OER movement may provide opportunities for Turkish tertiary education since it is likely

to accelerate changes in the traditional teaching and the evolution of more independent learners (OECD, 2007). In short, OER may help the improvement of current higher education system in Turkey by making educational resources more accessible.

1.2.2.1 Unequal Distribution of Faculty Members and High Demand for the Higher Education

With the help of the OER, the negative effects of unequal distribution of faculty members and resources to the universities can be reduced to some extent. In Turkey, steady increase in request for the higher education on one side and imbalance on distribution of faculty members among universities on the other side make resource-sharing necessary. Like most countries, Turkey needs to increase the participation in higher education, but it is not easy to meet this expectation. Following quotation is clearly explaining the importance of OER movement for developing countries.

> *The open education resource movement is especially important in emerging countries where higher education is still considered as a privilege due to shortage of available seats for everyone who would like to get in a university, where knowledge is still been considered as assets of professors, and where there are a few opportunities for people to improve themselves either in their profession or in general* (Aydin & Ulutak, 2010, p.1)

In spite of complaints about high unemployment ratio among university graduates, demand for university education is still very high. Table 1.1 shows student distribution by educational level as of 2011 (TÜBA, 2011b).

Another point in Table 1.1 which draws attention is that number of students in open and distance education and formal education is very close to each other. This also indicates the demand for alternative methods of formal education. This demand was also realized more than one decade ago by Sir John Daniel (1998), who is one of the prominent scholars in Open Education field. He reports (1998) his surprise by saying "the biggest surprise in my research was the discovery that Turkey's Anadolu University was probably the largest university in the world as measured by the number of degree-level students" (para.4).

Table 1.1 Student distribution by educational level (TÜBA, 2011b)

Higher Education Level	Formal Education	Open & Distance	Total Students Number
Associate Degree	613.077	429.273	1.042.350
Undergraduate	1.152.265	1.127.944	2.280.209
Graduate*	206.775	NA	206.775
Total Students Number	1.972.117	1.557.217	3.529.334

* including specialist degree in Medicine

As reported in the OECD report, OER movement can serve as a vehicle for reaching non-traditional groups of students and widening participation in higher education. Stacey also highlights this point by indicating that OERs are likely to bridge the divide between universities and the public because it removes formalities such as admission criteria, prerequisites, tuition fees and examinations (Stacey, 2007). At the same time "such initiatives can bridge the gap between non-formal, informal and formal learning" and provide new life-long learning opportunities for aging societies (OECD, 2007, p. 20). Conole and McAndrew (2010) also argue that OER "accelerates the bluring of formal and informal learning" (p.127). If learning is defined as "an everyday activity and we all learn more outside the formal learning environments than in schools and training settings", the importance of this movement can be understood clearly (Aydin & Ulutak, 2010, p1.).

Imbalance on distribution of faculty members is another issue that should be considered in Turkish higher education institutions. In fact, 60% of professors are working in universities that are located in the three biggest cities (Istanbul, Ankara, and Izmir) of Turkey (YÖK, 2007, p.95). It is very important to benefit from the expertise of such distinguished people across the country. Therefore, OER movement can offer our citizens the opportunities to benefit from expertise of those

distinguished people, as well as provide chance to close gap between formal and informal learning by opening new life-long learning opportunities.

1.2.2.2 Lack of Faculty Members and Resources in New Universities

According to statistics obtained from Turkish Academy of Sciences, the number of the universities in Turkey is more than doubled, to be more precise, as seen from Table 1.2, it increased from 76 to 164 between 2002 and 2011 (TÜBA, 2011b). Since there is an increase in the number of the universities, a need for resources for new universities has arisen. Therefore, it is important for the developed universities to share not only resources, but also the power of knowledge and expertise with developing universities. Another issue is again the problem of unequal distribution; this time concerning the ratio between number of students and faculty members in public and private universities. The average ratio is about 74 students per faculty member in the public universities and is about 49 students per faculty member in private universities (Ozan & Ozaslan, 2009).

Table 1.2 Increase in number of universities by years (TÜBA, 2011b)

Years	Number of Universities
1933	1
1946	3
1957	6
1978	19
1982	27
1984*	28 (27+1)
2001	76 (53+23)
2007	115 (85+30)
2011	164 (102+62)

*Foundation year of higher education council,

Note: Parenthetical data indicates public and private universities, respectively

1.2.2.3 Educational Developments

In Organization for Economic Co-operation and Development's (OECD) 2007 report, titled as Giving Knowledge for Free, four main forces that impact higher education institutions in the coming decade were mentioned: globalization, demography, changing governance and technology (OECD, 2007). It is important to use these forces for the improvement of Turkish universities and they should get along their steps well with changing world conditions. The collaboration of the universities toward this purpose is crucial in this aspect. As indicated in the Horizon report, written by USA rooted organization, New Media Consortium, to investigate forthcoming technologies that are likely to impact higher education, underlined OER movement and mobile technologies as two technological trends to be observed in 2010 (Johnson, Levine, Smith, & Stone, 2010). In the USA National Educational Technology Plan (2010), OER was referred as "an important element of an infrastructure for learning" (U.S. Department of Education, p.72). Therefore, OER movement may help higher education institutions in Turkey to keep up with the educational developments in other universities around the world. The potentials OER movement should be investigated in Turkish universities after careful analyses to get maximum benefits from its promises.

1.2.2.4 Underestimated Sides of the Academia: Teaching and Service

Being an academician requires three main responsibilities, research, teaching and service. However, Turkish Higher Education system gives much more emphasize to research dimension of the profession, but teaching and service dimensions have always been underestimated. It can be said getting a higher degree in academy is heavily based on research aspect. However, we need different mechanism in the academy system which emphasizes teaching side of the profession as well. Also, providing free educational resources for the society is a great public service activity. In this sense, OER can be considered as a starting point for this mechanism. Publishing resources as an OER is likely to improve the quality of faculty members' work since they will give more attention to their materials and resources if they want to share them openly with public. Therefore, it is expected that publishing resources openly is likely to have a positive impact on teaching dimension of the profession and society in general.

1.2.3 Impact on Foreign Policies of Turkey

OER movement may also have a positive impact on foreign policies of Turkey. This movement is likely to help higher educational institutions to integrate into Bologna process by accelerating content development (OLCOS, 2007). In addition to that, impact of Turkey on Turkish speaking countries (i.e. Azerbaijan, Turkmenistan, Uzbekistan etc.) can be expanded by opening educational resources in Turkish language for public use. In this way, people in these countries can find a chance to see educational content in Turkish Universities, so this can be seen as promotion of Turkish Universities. In this way, Turkish Universities might attract more students from such countries. Moreover, approximately 5 million Turkish citizens are living in abroad. A great portion (around 4 million) are living in the European Union member countries, 300.000 in Northern America, 150.000 in Australia and 200.000 in the Middle East (Ministry of Foreign Affairs, 2011, para. 6). According to Ministry of Foreign Affairs (2011), one of the main problems encountered by the expatriate Turkish community is education. Therefore, the OER movement might provide opportunities for the expatriate Turkish community abroad by providing materials and resources in their mother tongues as well as considering cultural and historical heritage of Turkey.

1.3 Problem Statement

As seen in the background of the study section, there are different problems which are need to be solved in Turkish context and OER movement can address those problems to some extent. The first problem is lack of necessary Turkish digital materials in the age of knowledge society and OER movement might be best way of increasing Turkish digital resources on the Internet. Another problem is that old instructional techniques have still been widely used in higher education. Therefore, as indicated in OECD report, OER movement is likely to accelerate in the traditional teaching and the evolution of more independent learners. Still another problem is unequal distribution of faculty members and high demand for higher education. In this sense, OER movement can be considered as a vehicle for reaching non-traditional groups of students and widening participation in higher education. Lack of faculty members and resources in new universities is another problem confronted in Turkish higher education. Finally, higher education system in Turkey

overemphasis the research aspect of the academia, but it is necessary to highlight teaching and service side of academia as well. Hence, publishing resources as OERs is likely to have a positive impact on teaching dimension of the profession and society in general. Considering all these major problems in Turkish context and potential benefits of OER movement that can address these problems, the important point is to use OER movement efficiently and effectively to address those problems. However, the most significant problem is that there are no available research studies about OER movement in Turkey. Thus, as a first PhD. study, current research aim to provide research-based guidelines about OER movement to get maximum benefits from its potential.

1.4 Purpose of the Study

This study aims to provide policymakers, administrators, decision makers and key stakeholders in higher education with a research-based guidance about successful implementation of OER project. More specifically, this study aims at determining main incentives and barriers for freely publishing course materials in Turkish Universities from faculty members' perspective and determine perceived values of sharing course materials for faculty. In line with these aims, present study also aims to understand experience of pioneer OER initiatives in Turkey. By doing this, it is aimed to shed light on the successes and challenges that emerged as these initiatives evolved.

The study plans to accomplish these aims by making policies for the TÜBA, YÖK, the Scientific and Technological Research Council of Turkey (TÜBİTAK), and managers of higher education institutions and disseminate the policies to these institutions through executive board of Turkish OCW consortium.

1.5 Significance of the Study

Although there is a great potential and promise in OER, the important point is to successful implementation and management of OER projects. Unless barriers are dealt with effectively and the elements that make a successful OER identified and harnessed, it is not possible to benefit from these great potentials of OER (Bissell & Boyle, 2007). Initiating an OER project at an institution involves planning, resources

and vision. This process starts with a communication to gather faculty and administrative support (Henson, 2005).

Faculty members in Turkey are the key players at the early stage of the OER movement and it is important to understand their perspectives and tendencies toward OER, more specifically in relation to publishing and sharing their course materials. In addition to that, exploring newly initiated national OER projects and taking lessons from them will give a good idea about successful implementation of future OER projects. In this sense, this study also seeks to provide insights to new initiatives planning to participate OER movement.

1.5.1 Role of the Faculty Members

In this process, faculty members have important role. Following quotation is very well explains the role of the faculty members in the OER movement.

> *The key component of OER is the educational content, and the essential source is the instructor who provides that content and agrees to make it freely and openly available. Whether OER is driven by 'top-down' institutional systems or 'bottom-up' individual or community initiatives, the creation of the educational substance depends upon faculty members. Securing the backing and involvement of faculty members is therefore a major priority for institutions involved in OER development* (Albright, 2005, p.7).

As explained by Albright (2005) in UNESCO's final forum report, involvement of faculty members should be a priority for institutions since they are the essential source of the content and it is not possible to make educational content free and open without their agreement to do so. A similar point is also highlighted in the MIT OpenCourseWare Story report that the faculty members are the key stakeholder group and a key enabler of an OpenCourseWare initiative so a "faculty centric" approach must be followed and faculty members must be included in the program advisory board as early as possible (The MIT OpenCourseWare Story, n.d.). OER Handbook also highlights the role of faculty members by claiming "as an educator, you are the most important contributor to OER because you understand the needs of

students and have expertise in at least on , if not multiple, fields" (Gurell & Wiley, 2008, pp.4-5). Finally, Pena (2009) stresses the role of faculty member by arguing

> *The faculty is the most important ingredient to foster in higher education environments. Without institution or faculty recognition, there will be little interest for faculty to volunteer their time and resources to contributing to the OER movement.* (p.6)

On the other side, faculty resistance regarded as the one of the major obstacles for institutions involving in an OER initiative (Pena, 2009; Sclater, 2011). Therefore, understanding faculty members' perspectives is very important in developing strategies to recruit faculty to contribute to OER and in developing policies around open projects, and in ensuring support for sustainability.

1.5.2 Lack of Know-how about Implementation of OER Initiatives

This movement is at its early stage in Turkey and universities do not have know-how about implementation of this movement in higher educational institutions. This point is also highlighted in Open Learning Network project, by saying, "many institutions and individuals are seeking guidance as they are new to the use and production of OER" (OLnet, p.27). As indicated by Barrett et al. (2009), most of the OER knowledge is tacit (p.34). Therefore, since OER is a young movement especially in Turkey, understanding collective experience of pioneer OER projects is crucial. However, there is not any available research study about OER movement in Turkish universities (Aydin & Ulutak, 2010, p.3). Therefore, as one of the first studies in this area in Turkey, it is expected that this study makes an important contribution to successful implementation and sustainability of the OER movement in Turkey by proposing policies for stakeholder and decision makers of this movement.

1.5.3 Raising awareness about potentials of the OER movement

It is expected that this study will raise the awareness about potential of OER movement in Turkey. It will also open new insights and directions for new research studies in the field of OER movement.

1.6 Research Questions

1. What are the <u>perceived</u> <u>barriers</u> for faculty members to share their course materials?

    a. Is there a significant difference between faculty members' perceived barriers for sharing course materials in regard to institute, academic experience, willingness to publish, course load, and university type?

2. What are the <u>perceived</u> <u>incentives</u> for faculty members to share their course materials?

    a. Is there a significant difference between faculty members' perceived incentives for sharing course materials in regard to institute, academic experience, willingness to publish, course load, and university type?

3. What are the <u>perceived</u> <u>values of sharing course materials</u> for faculty members?

4. What do OER practitioners in three national initiatives experience during the implementation of OER project in their own institution?

    a. What were the challenges that have been confronted by practitioners during implementation of OER projects in three national initiatives?
        i. What were the main reasons behind for these challenges?

    b. What were the strategies that have been applied during the implementation of OER projects in three national initiatives?

1.7 Definitions of Terms

Faculty members: Faculty members are stakeholder group whose main responsibilities are research, teaching, learning support and service in higher educational institutions.

Open Educational Resources (OER): Through this study definition proposed by Atkins, Brown & Hammond (2007) is used.

> *OER are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge* (Atkins, Brown & Hammond, 2007, p. 4).

OpenCourseWare (OCW): OCW is an OER model which is first adopted by MIT to publish almost all their course materials to be used free of charge by everyone.

Barrier: Barrier is defined as any obstacle which negatively affects (prevents or restricts) publication/sharing of teaching and learning materials as an OER.

Incentive: Incentive is defined as any factor which encourages faculty members to publish their course material as an OER.

Benefit: Opportunities provided by OER movement for different stakeholders such as self-learning, faculty members etc.

OER Practitioners: They are the main responsible for OER initiative at an institution. They have various responsibilities from faculty recruitment to technical issues of OER initiative. They can be a coordinator or technical support of OER initiative and they are directly involved with OER initiative at the institutions. .

Challenge: In the scope of this study, challenge is considered as a difficulty encountered by practitioners of the OER projects during implementation of the project. For example, unwillingness or lack of interest of faculty members can be considered as a challenge.

Strategy: Strategy can be regarded as any actions that can promote OER efforts and it can be applied or planned in the context of OER projects by practitioners.

CHAPTER 2

REVIEW OF THE LITERATURE

"The most promising initiative in e-learning is the concept - and the developing reality -of Open Educational Resources"

Sir John Daniel

This chapter starts with an introduction with open access movement and continues with a general review of the movement, barriers and incentives for OER movement and benefits of it.

2.1 Introduction

"Standing on the shoulders of giants" is a well-known expression, which indicates that today's advancement in technology, and science is mainly based on shared knowledge of people who live many years ago. Today's modern society could not have been even imagined without great contribution of those lived in past. Science and technology has continued to develop on the base of shared knowledge of human beings. Although main idea behind science and education is to building up knowledge, improve it and share the new knowledge (Questier & Schreurs, 2008, p.119), numerous barriers make difficult to access, use, reuse or find educational materials. A relatively new movement, Open Educational Resources (OER), has been launched to provide various solutions to those barriers.

2.2 Open Educational Resources (OER)

According to article 26 of the Universal Declaration of Human Rights,

"Everyone has the right to education… Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit" (United Nations, 1948).

As reported by Caswell, Henson, Jensen and Wiley (2008), OER movement holds numerous opportunities to turn a 60-year old declaration into a reality. This movement has attracted substantial attention in recent years (Conole & McAndrew, 2010; Yuan, MacNeill & Kraan, 2008; Schaffert & Geser, 2008). There was a noticeable increase in the number of open educational resources initiatives around 2000s (Kozinska et. al, 2010; Sclater, 2010). The number of the projects related with OER is also increased in recent years. For example, Open Learning Network (OLnet) project, Open Educational Quality Initiative (OPAL), Support Centre for Open Resources in Education (SCORE) project and many more projects. Various terms has been used to attribute this movement such as open content, open educational content, open source courseware (Materu, 2004), open learning resources, open resources or materials, open courseware and so on (Margulies, Sinou & Thille, 2005; Lane, 2010). These are the terms frequently used to refer this movement in the literature. Although there are some initiatives (Merlot, Connexions) started in 1990s, MIT OpenCourseWare has been provided great momentum to OER movement when it was started in 2001 as a large-scale initiative. The term Open Educational Resources term was first used in 2002 at a UNESCO forum about the impact of the OpenCourseWare (OCW) movement on higher education institutions (D'Antoni, 2009). While there has been proliferation of initiatives and research projects, no consensus can be found yet on the formal definition of OER (Margulies, Sinou & Thille, 2005; OLCOS, 2007; Schaffert & Geser, 2008). Despite lack of consensus on formal definition of the OER, most widely used definition of the OER is:

OER are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge (Atkins, Brown & Hammond, 2007, p. 4).

The term OER emerged after the OCW initiative, but OER has a wider meaning, which also includes OCW. From different definitions, it can be understood that OER is a general term including software, courseware and open licenses. In this study, focus will be on teaching and learning materials related with a higher education level course and OER term is used throughout the study.

There are three major developments trigger the OER movement greatly. These are openness, development in web technologies and open licensing. By using opportunities provided by ICT technologies, the OER movement takes the inspiration of the open source software movement (Baraniuk, 2008; Caswell, Henson, Jensen & Wiley, 2008, p.2) and open access for scientific publication (Schaffert, 2010). In fact, main inspiration behind OER movement is not only "the simple and powerful idea that knowledge is public good" (Smith & Casserly, 2006, p. 8), but also successful examples of the open source software movement (Matkin, 2006) such as Linux operating system, Moodle learning management system. Following section covers these three developments.

2.2.1 Openness

The swift advancement in Information and Communication Technologies (ICT) has provided opportunities for improving access, transfer and sharing of knowledge and information around the world. With this advancement, the idea of "openness" has become more popular. In OECD report (2007), two main properties of openness were indicated. These are free availability of resources on the Internet and as few restriction as possible not only in terms of technical, but also legal and price (p.32).

2.2.1.1 Open Source Software

The concept of openness began to manifest in software development in the 1960s when a lack of commercial software forced researchers to share software codes (Moon & Sproull, 2002). It was 1980s that Stallman established Free Software Foundation and GNU project when he got frustrated about property software (Questier & Schreurs, 2008; Baytiyeh & Pfaffman, 2010a). Open source software enables anyone in the world to make modification, share it with others or in some cases commercially distributes it. Despite numerous myths about open source, the

important factor in open source software is collaboration (O'Reilly, 2000) Following Table 2.1 list some popular open source applications and their functions.

Table 2.1 Some of the popular open source software

Open source software	Functions
WordPress	It is web software for building blogs for personal or different purposes. It is highlighted in the main page of the WordPress that over 25 million people use it for different reasons.
Mozilla Firefox	Firefox is one of the most popular internet browsers developed by non-profit Mozilla organization. Its mission is to promote openness on the Web. Firefox has the all features that commercial counter partners have (Wiley, 2006).
Linux	It is an open source operating system. It has many different distribution of Linux such as Debian, Ubuntu etc. Development of the Linux is one of the most important examples for open source software. Now it is used in various platforms like mobile devices, servers, or televisions. Google, for instance, is working on 100.000 GNU/Linux servers (O'Reilly, 2004).
Moodle	Moodle is a learning management system or virtual learning environment that enables users to manage their teaching and learning activities on the Web. It is a free web application that used by educators for developing effective online learning sites.
MySql	It is open source database software preferred by the world's largest organizations such as Google, Yahoo, YouTube. In its web site, it is indicated that throughout its history, more than 100 million copy of MySql has been downloaded.

As can be seen from Table 2.1, there are various open source software in different areas from operating system to learning management system. Now, it is possible to see that with the successful examples in open source software, openness culture is "advancing from the edges of society to the core of academic culture" (Wiley, 2006, p.1).

2.2.1.2 Open Access Journal, Open Textbook and Open Data

Over time, the open movement has disseminated to areas such as academic journals, textbooks, and educational materials (Humbert, Rebillard, & Rennard, 2008; Wiley, 2006). In early 1990s, open access journal movement emerged to solve communication problems in traditional scholarly system. (Atilgan & Keten, 2008) It has changed scientific communication drastically. By the time 2008, there are more than 2.500 open access journals available in all fields (Tonta, 2008). For instance, Educational Technology & Society is a respectful open access journal in the educational technology field and indexed in social science citation index (SSCI). There are many benefits of open access journal, but one of the most indicated benefit is that research impact increase with open access since it makes article available to those interested free of charge (Atilgan & Keten, 2008; Tonta, 2008).

Similar to open access journal, open textbooks became prevalent in 1990s. Various free, open texts books are accessible for download such as at the Community College Consortium for OERs' Open Textbook Project, and at Connexions Project (Butler, 2009). Another innovative project about open textbooks is *Flatworld knowledge* initiated by a group of people. In the scope of this project, books are offered freely online and the project offers print-on demand options for its users. Price of black and white edition is about 29$ and color edition is about 59$. It is also possible to print out chapters of the books. Furthermore, it provides supplementary materials (flash cards, online practices, videos etc.) to its users (Flatworld Knowledge, 2011).

In near future, it is likely to see the impact of openness philosophy on the research fields as researchers share their raw experimental data for collaborative analysis in data mining research. There are currently some projects open their project data to

everybody and people can publish research papers by using data gathered in the scope of these projects. For instance, data collected in EuKids Online II project, about European children's experiences of the internet across 25 European countries, will be publicly available during 2011 (EU Kids Online II, 2011).

2.2.2 Development in Web Technologies

Developments in web technologies make the resources sharing simple. The Web 2.0 phenomenon (O'Reilly, 2005) allows users to become not only recipients but also producers of content. Most commonly referred Web 2.0 tools are social networking sites, video and photo sharing sites, blogs, RSS feeds, tags , wikis and so on (Lakhan & Jhunjhunwala, 2008). Consumers become "prosumer" with one-sided content sharing to two sided, interactive platforms. Now, it is possible that an ordinary people can sell his/her products to anywhere in the World by using websites like "e-bay". It can be claimed that with web 2.0, the Internet has been converted from a static repository to a dynamic platform. The rise of social networking (i.e. Facebook, Twitter) and web-based collaborative tools (i.e. wikis, googledocs) enable user-generated content sharing and collaborative content creation trivially simple (Bissell, 2009). For instance, now with Wikipedia millions of people around the world collaboratively generate encyclopedic content in many languages. Wikipedia is one of the most-used sites for getting information (Baytiyeh & Pfaffman, 2010a). In his book, *Wisdom of Crowds*, Surowiecki (2004) claimed that for centuries human beings have selected useful developments in favor of humanity. In this sense, he further argues that collective intelligence superior to individual intelligence. In other words, he claims that decisions taken in groups are better than decisions taken by any single member of the group.

In their book, *Herşey Çıplak*, Aksu, Candan and Cankaya (2011) call forthcoming form of the Internet as Web^3 instead of Web 3.0. They argue main features of it as intelligent, interactive and fast. By intelligent, they mean that devices will be able to understand information on the web (semantic). For instance, you are going to on vacation, so home system should understand this and automatically adjust temperature of the home or even your computer start automatic back up during your vacation. They see Web^3 as interactive because they argue that in near future

connection will become transparent and machine will communicate with each other. It means machines can connect each other automatically (transparent) without spending extra efforts for connection. For instance, automobiles will receive weather information automatically from the Internet and adjust itself according to weather conditions (Aksu, Candan & Cankaya, 2011). All these developments indicate that it is important to use existing and forthcoming features of the Internet effectively and efficiently.

2.2.3 Open Licensing

There are a number of open licenses available such as Academic Free License, BC Commons, GNU free documentation licenses and Fair Use Network. One of the most popular open licenses is the Creative Commons (CC) license released copyright licenses for public use in December 2002 (Pena, 2009; OECD, 2007). Open licensing has a vital role in OER movement. Bissell (2009) sees CC licenses as "the infrastructural glue for the OER movement" (p.102). It offers a new way for protecting copyright laws by providing various and easily understandable licensing options to both owner and user of the content. For example, OpenLearn project saved 100.000 pound by choosing already established licenses, CC (McAndrew & Cooper, 2011). In this way, they do not have to develop a new license specifically for the OpenLearn project.

In CC web site, CC licenses are categorized in three layers, which are lawyer-readable code, human-readable code and machine-readable code (Figure 2.1). The first layer of CC is lawyer-readable code. As can be understood from its name, it includes a kind of a special text and language which can be understood by legal scholars. It also provides legal base for other two layers. Human-readable code, on the other hand, is a summary of key terms used in actual license and designed for ordinary users. It can be imagined as the user-friendly interface of the lawyer-readable code (Creative Commons, 2011a). As for the third layer, machine-readable format is a kind of metadata which can be understood by software systems and search engines. For instance, users can search CC licensed content in advance search setting of the Google with the help these metadata information attached related contents. With this three-layer structure, rights issues cannot be only understood by

lawyers anymore, but also ordinary producers and users of contents, and even the Web itself (Creative Commons, 2011a).
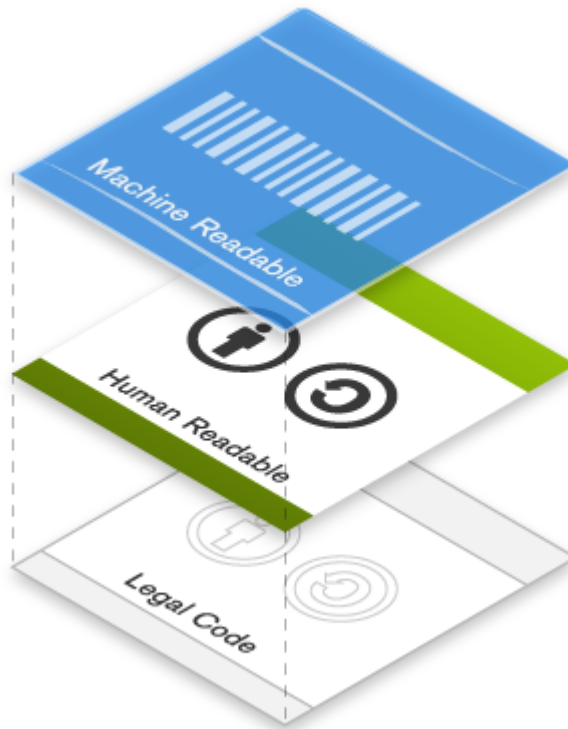
Figure 2.1 Layers of Creative Commons License (Creative Commons, 2011a)

In recent years, there is a steadily increase in CC licensed works. Figure 2.2 shows the growth of licensed works between 2006 and 2010. More than 400 million works are licensed with CC.
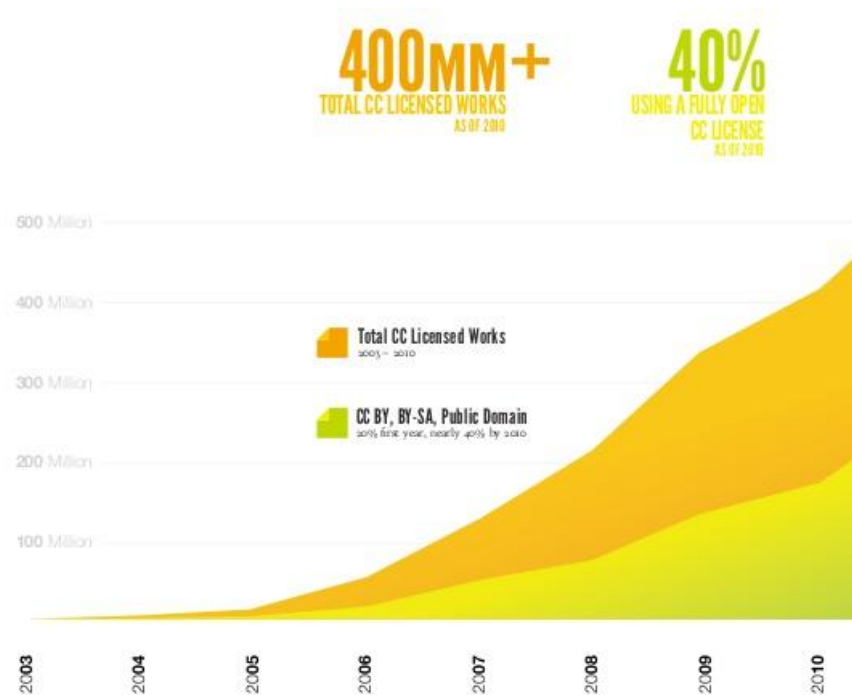
Figure 2.2 Visualizing the growth of CC licensed works (Creative Commons, 2011b)

There are mainly seven types of CC license options. These licenses options are **summarized from CC web site in Table 2.2**

Table 2.2 Types of Creative Commons licenses options (Adopted from Creative Commons, 2011a)

CC Licenses Types	Description	Associated Symbols
Attribution (CC BY)	This license lets people share, remix or tweak as long as owner of the works attributed. They can also be used commercially.	

Table 2.2 (cont'd)

Attribution-NoDerivatives (CC BY-ND)	This license permits for redistribution, commercial and non-commercial, as long as it is remained unchanged and in whole, with attribution to owner.	
Attribution-NonCommercial-ShareAlike (CC BY-NC-SA)	This license lets others remix, tweak, and build upon works as long as they credit owner and license their new woks under the same terms. They also cannot use them commercial purposes.	
Attribution-ShareAlike (CC BY-SA)	This type of license allows people to use, remix tweak and build upon others' works provided that they attribute owner and license their new works under the same terms.	
Attribution-NonCommercial (CC BY-NC)	This license allows others remix, tweak, and build upon owners' work non-commercially. They do not have to license their derivative works on the same terms, but they have to acknowledge owner and be non-commercial.	

Table 2.2 (cont'd)

Attribution-NonCommercial-NoDerivatives (CC BY-NC-ND)	This license is the most restrictive of among seven main licenses of CC. It only permits people to download works and share them with others as long as they credit owner. They cannot alter them in any way or use them commercial purposes.	
No-Rights Reserved (CC0)	This license allows people to do anything without restriction.	

2.3 OER Models

Now, it is possible to see many OER initiatives around the world, each with their own "distinctive models" (Sclater, 2010, p.9). Following section review three major OER projects (MIT OpenCourseWare, Rice University's Connexions, and UK Open University's OpenLearn). The reason behind this selection is that they each appear to have their own distinctive OER development model that differentiates them from other OER initiatives. They show much of the diversity possible in OER initiatives in higher education. These ranges of activities can be classified as illustrated Figure 2.3.
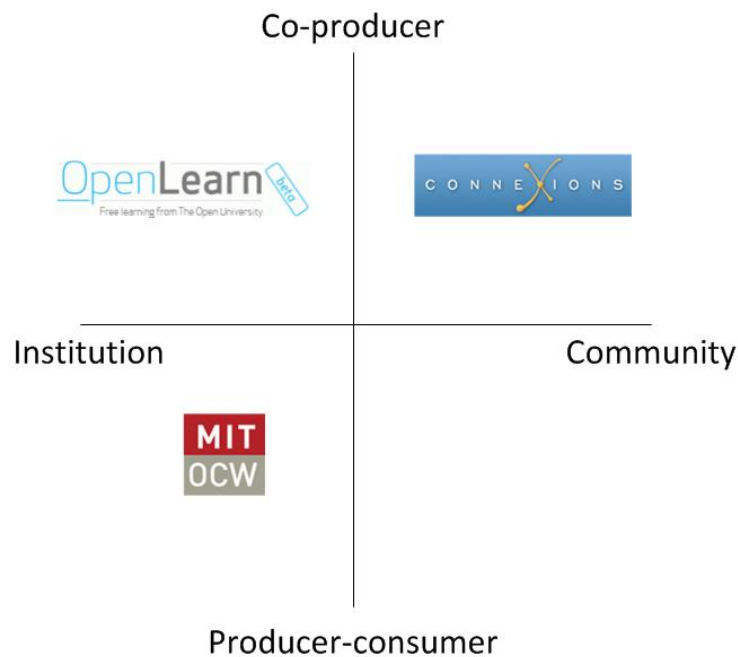
Figure 2.3 Categories of open educational resources providers (OECD, 2007)

2.3.1 MIT OCW Model

In OpenCourseWare Consortium's website, OpenCourseWare (OCW) is defined as:

- *free and open digital publication of high quality educational materials, organized as courses,*

- *is available for use and adaptation under an open license,*

- *does not typically provide certification or access to instructors.*

Above definition of the OCW is nearly same as the other definitions made by the MIT, Centre for Open and Sustainable Learning (COSL) or other leading institutions on OCW. However, it is important to highlight that neither OCW have to be an entire course nor it provides certification. In addition, it does not mean online courses (Johnstone & Poulin, 2002). These points also underlined MIT's OCW website in order to prevent misconceptions about OCW. However, now different

OER modes have been emerging which claim using OER for certification or accessing instructors (Sclater, 2010).

MIT OpenCourseWare initiative was firstly announced in April 2001 by the MIT, with the two general goals; "1) to provide free access to virtually all MIT course materials for educators, students, and individual learners around the world and, 2) to extend the reach and impact of MIT OCW and the [OpenCourseWare] concept" (Carson, 2006, p.71).

This initiative has been supported by the William and Flora Hewlett Foundation, the Andrew W. Mellon Foundation, Massachusetts Institute of Technology, and the MIT Faculty. In the MIT OCW website, there are different courses from all of MIT's academic disciplines including Economics; Electrical Engineering and Computer Science; Engineering Systems Division; Foreign Languages and

This initiation was rapidly adopted not only in the USA, but also in many other countries such as China, Japan, France, the Netherlands, Vietnam, Thailand, India and Spain (Kozinska et.al, 2010). As one among several models, the Massachusetts Institute of Technology (MIT) OpenCourseWare initiative "is perhaps the best-publicized and most copied institutional OER model" (Albright, 2005, p.4). This movement has been played a very important role in initiating and disseminating OER around the world. The popularity of MIT and the financial support it received are two important parameters which bring success to MIT OCW project. (Kursun, Wilson, McAndrew & Cagiltay, 2010). The MIT OCW and translated site are accessed over 1.2 million times per month. Translated site are from China and Taiwan. In China, Chinese Open Sources for Education (CORE) provides this service and in Taiwan this service is provided through Open source OpenCourseWare Prototype System (OOPS). Figure shows the site traffic that MIT OCW and translated site took between October 2003 and April 2006 (Smith & Casserly, 2006).
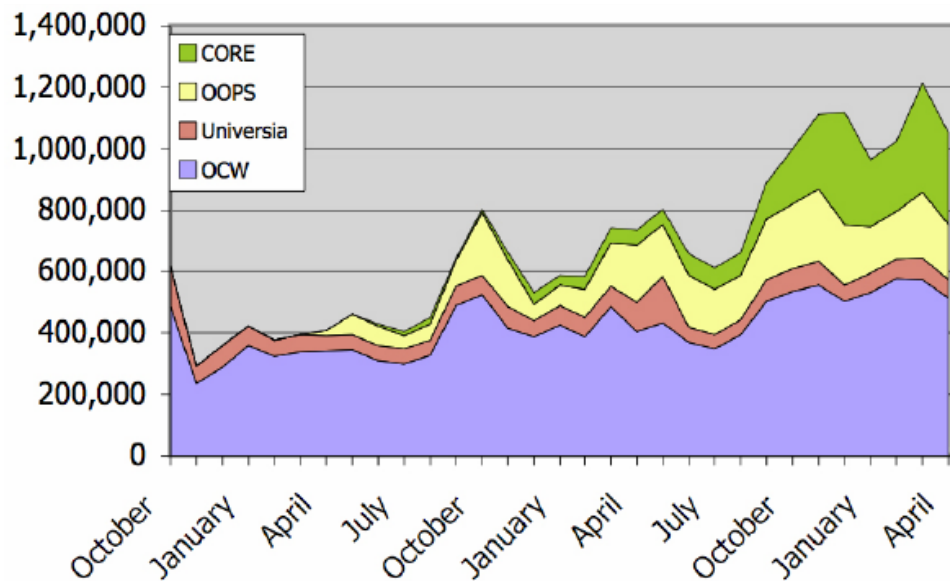
Figure 2.4 Monthly visits to MIT OpenCourseWare site, October 2003 through April 2006 (Smith & Casserly, 2006)

It can be said that MIT follows a very faculty centric model. That is, content has been produced from teaching materials of the faculty members. MIT OCW initiative has materials which are used as supplementary material in traditional classrooms

2.3.2 OpenLearn Model

OpenLearn has a kind of mixed model. That is, its content relies heavily on the Open University's course materials, but the end-user can contribute their own content in the LabSpace, as well. It consisted of two different sites, the LearningSpace which is a supported open learning site for learners; the LabSpace which is a supported community-building site for creators. LabSpace is an experimental area for collaborative activities and projects (McAndrew et. al, 2009). The OpenLearn project has self-learning materials designed for distance learners though these also have the potential to be used as supplementary material in traditional campus based institutions (Wilson, 2008).
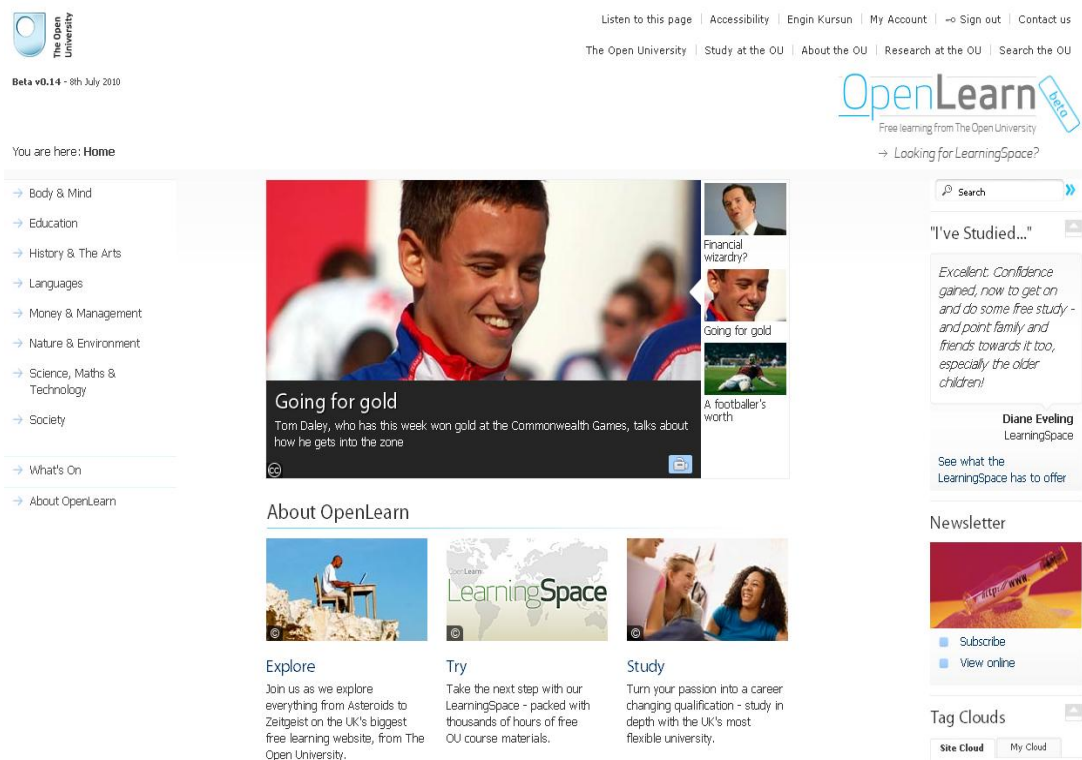
Figure 2.5 A screenshot from home page of the OpenLearn project

There are different community building tools used in OpenLearn portal. These tools and their short description were given below:

- *Compendium* is a software tool providing a flexible visual interface for managing the connections between information and ideas.
- *Cohere* is an experimental knowledge mapping tool.
- *FlashVlog* is a tool allowing you to create video diaries online, almost instantly
- *Flash Meeting* is a one-click video conferencing tool.
- *The forums* on OpenLearn give the OpenLearn community a place to meet, discuss and share ideas.
- *The Learning Journal* enables people to write their own notes and reflections on the material they are studying (LearningSpace, 2011).

2.3.3 Connexions Model

Connexions model is decentralized which means it is mainly based on end-user participation. Unlike other OER projects such as MIT OCW or UK OpenLearn, everyone can contribute contents in the Connexions project. Its contents are comprised not only of self-learning materials, but also material that supports traditional classroom learning. It consisted of modules and collections. In glossary in Connexions web site, a module is defined as "*the basic building block of a course, textbook, or other type of collection*" (Connexions, 2011). A collection, on the other hand, is described as "*a group of modules arranged in a specific order and labeled by the author, editor or instructor building the collection*" (Connexions, 2011). A collection can be a course, textbook, report, survey, journal so on (Baranuik, 2008). It employes CC attribution licence which means you can also use the materials commercial purpose.

Although Connexions has some external funding, the revenue model is based on the relationship with profit or non-profit making institutions. Users have a chance to contribute their own content. The main feature of Connexions "*is an emphasis on free content that is open-licensed to facilitate sharing, easy re-use, and easy re-contextualization*" (Baraniuk , p.4). Figure 2.6 shows a screenshot from home page of Connexions portal.
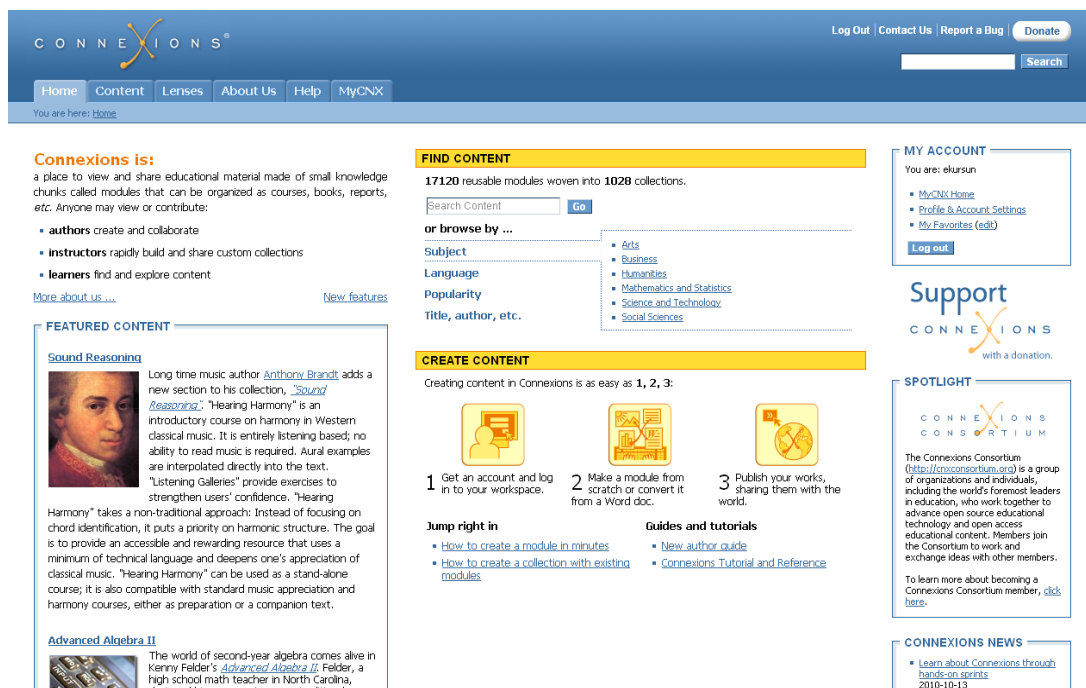
Figure 2.6 A screenshoot from home page of Connexions web site

Connexions portal is based on the open source content management system Plone, and the new tools are provided as free (Questier & Schreurs, 2008).

2.4 International Collaborations

A number of collaboration and consortium involved in OER has also been emerged in last decade. Following are some of the examples:

2.4.1 International OpenCourseWare Consortium

It was founded with the collaboration of more than 100 higher education institutions and associated organizations from around the world. The main mission of the consortium is to promote the further spread and uptake of OCW idea throughout the World. The consortium is continuously expanded and as of 2011 members of OCW Consortium has increased to 249 with participation of various higher education institutions, associate consortia and affiliates (OCW Consortium, n.d.). The Figure 2.7 shows growth in number of member institutions in OCWC by region between September 2005 and November 2009 (Bays, 2009).
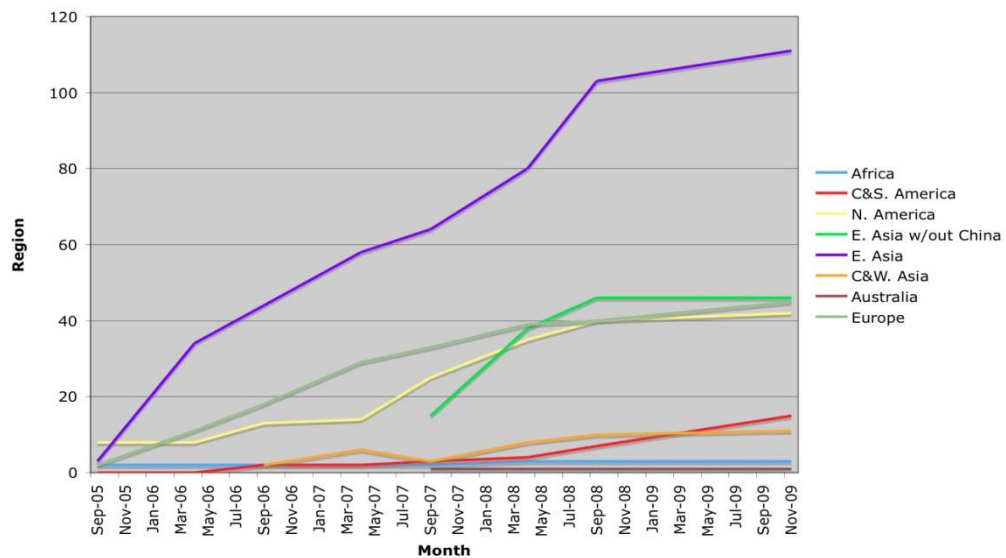
Figure 2.7 Growth in number of member institutions in OCWC by region (Bays, 2009).

2.4.2 China Open Resources for Education (CORE)

CORE was founded in October 2003 as a non-profit organization to promote OCW movement in China. The CORE organization consists of 26 IET Educational Foundation member universities and 44 China Radio and TV Universities (CORE, 2011). CORE has been supported by the China Ministry of Education. Its mission is to both promote OER movement and improve quality of education in China. Main activities of the CORE is to involve organization of

- translations and proof reading of translated courses into Chinese language,
- conferences, seminars,
- localization of the Chinese version of open source content/learning management system such as Sakia, Moodle and eduCommons.

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Figure 2.8 A screenshot from CORE's web site

As of February 2008, translation of 347 courses from other OCW projects in the globe was completed. Majority of the translation is from MIT OCW with a 335 of 347. CORE has also Open Education Scholarship program to encourage faculty members and students to involve with OER movement. Beside this, it also organizes international cooperation and exchanges with other organization such as OECD, OCWC (CORE, 2008). Figure 2.8 shows a screenshot from CORE main page.

2.4.3 Universia

Universia is a consortium of over 700 universities and colleges across 10 countries from Latin America, Spain, and Portugal aiming to encourage development in OER movement in Hispanic University Community. Consortium translated about 75 MIT OCW courses into Spanish and Portuguese (Johnstone, 2005). Figure 2.9 shows a screenshot taken from home page of the universia.

Figure 2.9 A screenshot from Universia's web site

2.5 Open Educational Resources Movement in Turkey

OER initiatives in Turkey can be categorized under three groups. The first group is the nationwide OER initiative led by the Turkish OpenCourseWare Consortium within the body of Turkish Academy of Sciences (TÜBA). In this initiative, there is allocated budget provided by the State Planning Organization (DPT) and quality assurance process employed before publishing courses free to use. The second category includes institutional-based initiatives started by universities who open their course materials through their own efforts and facilities. This category has no strict quality assurance system; faculty members are responsible for the quality of their own course materials. Finally, personal attempt led by individual faculty members is the third type of OER initiative in Turkey, though the exact number of such initiatives is impossible to assess.

2.5.1 Nationwide OER projects

In 2004, a group of young Turkish researchers working in the USA came together under the *Biliminsanı Platformu*. In collaboration with researchers from Turkey,

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Europe, and the USA, they wanted to initiate the Turkish OCW project, translating MIT biology courses into the Turkish language. Although this project did not continue, it may be the first instance of developing OER courses in Turkish language after the birth of OER movement in the World.

The impact of the OER movement has been seen in Turkish Tertiary Institutions since the establishment of the Turkish OpenCourseWare consortium under the leadership of the Turkish Academy of Sciences (TÜBA). In October of 2006, TÜBA sent a letter about the OCW to all university administrations in Turkey, and a meeting was held in March of 2007 with 24 universities, the Turkish Academic Network and Information Center (ULAKBIM) under the TÜBİTAK, the YÖK and the DPT (UADMK, 2010). In April, an agreement was signed between participant universities and institutions that formed a consortium (TÜBA, 2011a). In May of 2007, the first Turkish OpenCourseWare Consortium (UADMK) general meeting was held, and an executive board was selected. With little progress from 2007 and 2009, after the second UADMK general meeting in May of 2009, activities related to OER increased. The number of universities in the Turkish OCW consortium has increased to 60 since its inception. Figure 2.10 shows cities where consortium member universities are located. In Istanbul, 10 universities are members, six private and four public; there are also four private and four state universities in Ankara in the consortium. Although the UADMK has a large pool of members only seven of them have developed their own OCW portals as of June, 2011.

State Universities
Foundation Uni.
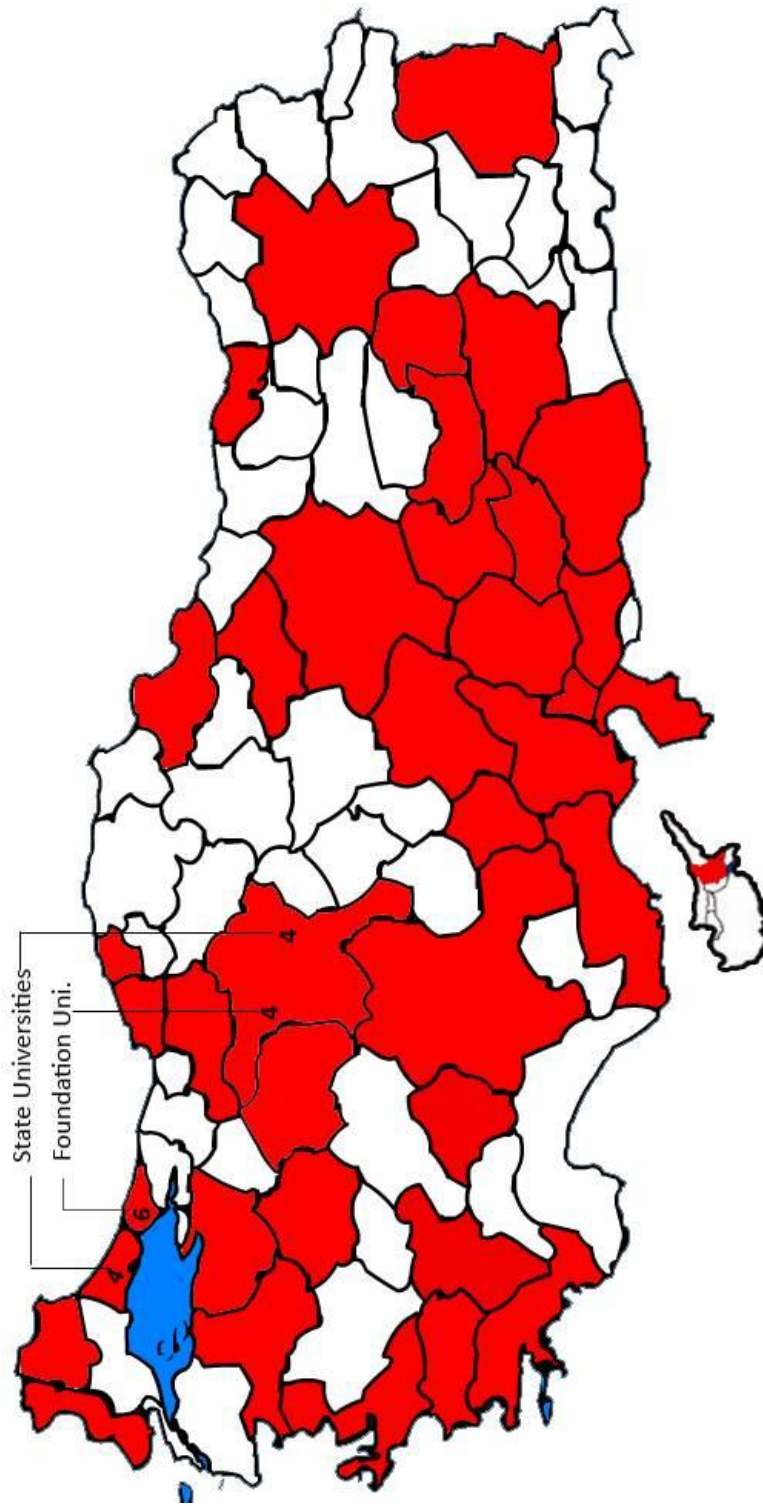
Figure 2.10 Cities where Turkish OCW consortium member universities located

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In the DPT's 2006-2010 Information Society Action Plan, the OER movement was designated as a priority under action number 89 (DPT, 2009, p.29). In 2009, the DPT provided a grant of 1.2 million USD for a two-year OER project under the leadership of the UADMK. In 2010, the first year of the project, courses from natural and applied science were developed. In the second year, courses from the social sciences will be translated to Turkish from other OER initiatives and new courses will be developed. Interest in OER is growing in Turkey with the recognition of institutions like TÜBA and DPT. A total of 32 open courses have been prepared in Natural and Applied Sciences, original courses developed by Turkish faculty members, 20 translations from MIT OCW, and one translation from Utah State University OCW (TÜBA, 2011a). See Appendix S for list of courses translated and see Appendix T for list of courses developed in the first year of the project. Figure 2.11 shows a snapshot taken from UADMK website where list of translated and original courses developed in the scope of the first year of the OCW project can be seen

Figure 2.11 List of original and translated open courses in the scope of the first year of the OCW project

2.5.2 Institution-based OER initiatives in Turkey

Institution-based OER initiatives in Turkey can be categorized in two. While the first category are consisted of UADMK member universities, the second category are composed of institutions which are not part of UADMK.

2.5.2.1 UAMDK Member Universities

There are seven institution-based OER initiatives as of June 2011 indicated in UADMK portal. Three of them are from foundation-founded universities and four from state founded universities. These initiatives are listed in Table 2.3.

Table 2.3 Institution-based OER initiatives and their web address in Turkey

University	OCW portal web address	Type
Ankara University	http://acikders.ankara.edu.tr/	State
Atılım University	http://acikders.atilim.edu.tr/	Foundation
Baskent University	http://acikders.baskent.edu.tr/	Foundation
Eastern Mediterranean University	http://opencourses.emu.edu.tr/	Foundation
Gazi University	http://acikders.gazi.edu.tr/	State
Hacettepe University	http://acikders.hacettepe.edu.tr/	State
Middle East Technical University	http://ocw.metu.edu.tr	State

Following is an example initiative from state-founded university.

2.5.2.2 Hacettepe University OpenCourseWare Initiative

Hacettepe University, a state university founded in 1954, is one of the leading universities in Turkey. There were 32,374 students and 3,595 faculty members as of the 2010-2011 academic year. It houses 13 faculties, 13 institutes, two schools, one conservatory, six vocational schools, and 44 research and application centers (Hacettepe University, 2011a).

The Hacettepe OCW project (HUADM) is led by the Digital Media Research and Application Center. There are eight open courses available in the portal under Computer Education and Instructional Technology, Electrical and Electronic Engineering, and Mathematics. Course materials are generally available in presentation format (pdf, pps, ppt). Courses under the Electric and Electrical Engineering department are videos of both lecture and problem solving sessions.

New course applications for HUADM can be submitted through e-mail. Materials are organized by project team and processed in collaboration with the responsible faculty member (Hacettepe University, 2011b).
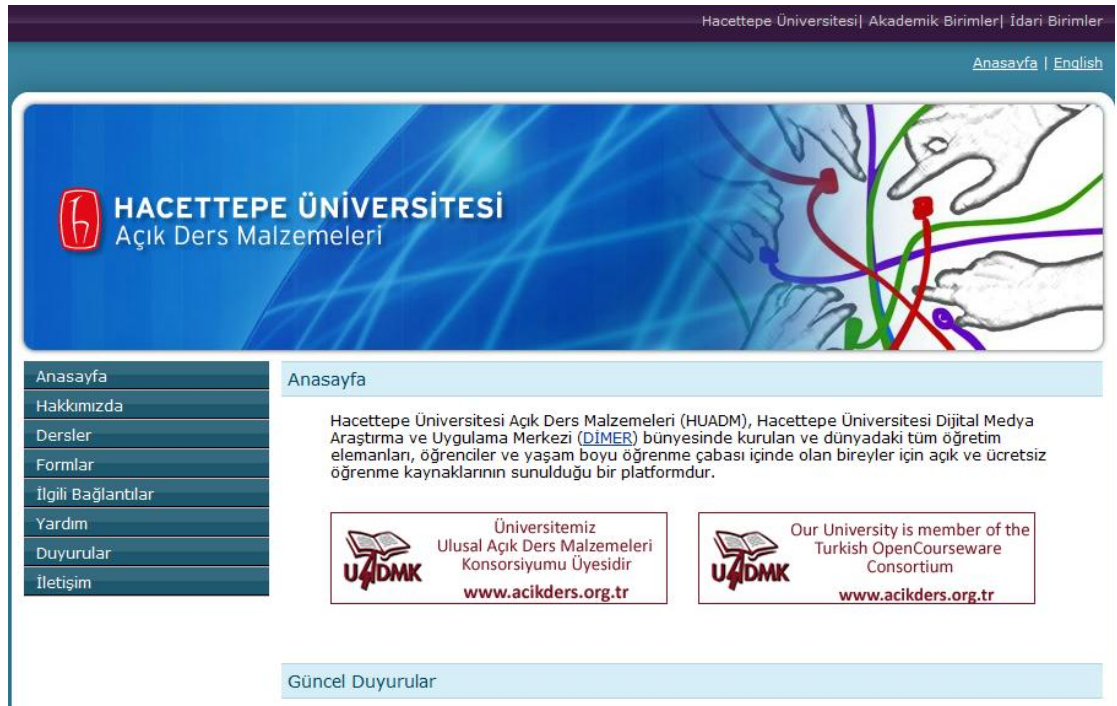
Figure 2.12 A screenshot from Hacettepe University OER portal

Following is an example initiative from foundation-based university.

2.5.2.3 Atılım University OpenCourseWare Initiative

Atılım University, a private university established in 1997, currently has 4,495 undergraduate students, 626 graduate students and 376 faculty members. The language of instruction for most courses is English (Atılım University, 2011).

The Educational Technology and Pedagogy Office (ETPO) leads the OCW initiative for Atılım University. The Atılım OCW portal (http://acikders.atilim.edu.tr/) has two interfaces. One provides (a) background information about the OCW project in general and with specific regard to Atılım University and (b) information about distance education programs through Atılım university and ETPO. The second interface is where all courses are organized into. Atılım University also uses Moodle as a course management system for their OCW initiative. Currently there are four open courses available in the portal, accessible from the main interface. Although many courses are listed, most of them are not available for public use or are not yet complete. Figure 2.13 shows a snapshot from the Atılım University OER portal.

Figure 2.13 A screenshot from Atılım University OER portal

2.5.2.4 Other Initiatives

Other than these member universities, there are some other institution-based OER initiatives as well. These are Anadolu University's Yunus Emre project (http://yunusemre.anadolu.edu.tr/) and Istanbul Technical University's Ninova project (http://www.ninova.itu.edu.tr/en/). It seems that the number of these initiatives is going to increase in next couple of years.

2.5.2.5 Anadolu University- Yunus Emre

Anadolu University, a state university founded in 1968, conducts its activities through 12 faculties, three of which are distance education, one state conservatory, six schools, three vocational schools, five graduate schools, and 38 research centers and units. A total of 1,926 faculty members work at the University. Anadolu University has 1,730.656 open education students, 25,078 resident undergraduate students, and 2,018 graduate students (Anadolu University, 2011a)

Providing open education since 1982, Anadolu University has the richest self-learning digital contents in Turkey. The name of the OER initiative in Anadolu University is Yunus Emre. This initiative is referred as new age learning portal. There are 149 courses available in the portal from 20 different departments, including Family and Child Development, Business, and Educational Sciences. Courses have content such as e-Exercise, e-Course, e-Book, e-Television, e-Exam, and e-AudioBook. Each course has one or more of these content types (Anadolu University, 2011b). These courses are taken from current open education programs available in Anadolu University. Figure 2.14 shows a screenshot from the Yunus Emre portal.

Figure 2.14 A screenshot from Anadolu University-Yunus Emre OER portal

2.5.2.6 Istanbul Technical University- Ninova

The history of Istanbul Technical University (ITU) dates back to 1773. In 1946, ITU became an autonomous university. It continues its academic activities with 13 faculties, 37 departments, and 5 institutes. As of the 2009-2010 academic year, it had 23,099 students and 2,200 faculty members (Istanbul University, 2011a).

The OCW initiative at ITU takes its name from the capital of Assyria, Ninova, home of history's first known library. The Computer Center of ITU leads the Ninova project. They use a self-developed course management system. All courses are categorized in terms of faculty and institute names on the front page of the Ninova portal (Istanbul University, 2011b). However, only some course materials are open to the public; there is a link on the front page of the portal providing quick access to all open courses. Unlike the projects above, which structure courses week by week,

each course in the Ninova project has Course Information, a Weekly Lecture Plan, Evaluation Criteria, and Resources sections. Course materials are in the resources section and consist of formats such as pdf, xls, doc, and jpeg. It is indicated in the Ninova portal that faculty members can determine the access level of the course. Ninova enables faculty members to open course materials to everyone, to only ITU faculty members, or to only students taking the course (Istanbul University, 2011b). Currently more than 80 courses are open to the public. Figure 2.15 shows a screenshot of the home page of Ninova's portal.

Figure 2.15 A screenshot from Istanbul Technical University – Ninova portal

2.5.3 Individual Attempts

There are also a number of faculty members share their course materials through their personal web sites. However, generally these resources are not licensed by an open license like CC.

Figure 2.16 is a sample screenshot from a faculty member who publish their course materials through their own web account. His website address is http://www.doganaydal.com/. Though the site requires username and password, it is simple to register the system. After registration, course materials become accessible. It has different types of courses materials including animations, pictures, slides etc.

 Figure 2.16 A screenshot from a faculty member who publish their course materials

2.6 Barriers, Enablers and Benefits of OER Movement

2.6.1 Barriers

For the purpose of this study, barrier is defined as any obstacle which negatively affects (prevents or restricts) publication/sharing of teaching and learning materials as an OER. Although OER movement holds diverse promises for teaching and learning, there are various barriers which prevent development OER movement (Bissell & Boyle, 2007; The Cape Town Open Education Declaration, 2008). It is therefore essential to understand these barriers to be able to overcome.

In his paper about the opportunities and challenges associated with OERs, Hylén (2006) touch upon three main challenges for OER; the lack of awareness of copyright issues, quality assurance and sustainability (Hylén, 2006). Similarly, Yuan, MacNeill and Kraan (2008) categorized major challenges of OER as sustainability, intellectual property and copyright issues, quality assessment and enhancement, interoperability. Pena is also touched upon copyright issues in her paper. She sees existing copyright laws as one of the most significant barriers in the OER movement (Pena, 2009). Matkin (2006) categorizes the barriers as those involving intellectual property issues, a lack of technological innovation and tools, and cultural and language barriers.

A study, conducted by Lee, Albright, O'Leary, Terkla, and Wilson (2008) to understand faculty concerns related the Tufts OCW initiative, found that faculty members are concerned that excluding copyrighted materials from their content will diminish the quality of their materials. They also feel that having compared with rich, internal course materials, initial OCW courses are not mature enough. So, this may devalue their reputations and made the course seem immature. Other concerns that they found are the time commitment required and loss of control over materials (Lee, Albright, O'Leary, Terkla, & Wilson, 2008).

In its report, *Giving Knowledge for Free. The Emergence of Open Educational Resources*, the OECD (2007) categorized barriers under the five themes. These are technical, economic, social, policy-oriented and legal. In the scope of OECD OER

project, a web-based survey targeting individual teachers and researchers was administrated and 193 people from 49 different countries throughout the world responded the survey. When asked to value nine possible barriers for engagement of other colleagues in the production of OER, the most significant barrier were said to be lack of time with about 67% percentage. This barrier is followed by the lack of skill with 61% percentage and the lack of a reward system with 58% percentage. On the other hand, the least significant barrier was lack of access to computers and other kinds of hardware and software with 15 % percentage (OECD, 2007). Although there were not a remarkable difference between OECD and non-OECD countries, lack of skills is the most significant barrier for latter and lack of time is the most significant for the former.

The Open eLearning Content Observatory Services (OLCOS) project, which is co-funded under the European Union's eLearning Programme, proposed an Open Digital Educational Content (ODEC) report 2012 (OLCOS, 2007). In this report, they grouped possible inhibitors according to their short-term to medium (until around 2009) and long-term influence (until 2012) as the following. Short-term to medium-term inhibitors:

> *1) Growing competition for scarce funding resources, 2) Difficulty in finding a balanced approach for open and commercial educational offerings 3) Intellectual property issues, 4) Fears of low recognition for OA publications, particularly among young researchers, 5) Lack of policies for the development and use of repository at institutional level 6) Lack of communication and cooperation between system and tool developers and educators* (OLCOS, 2007, p.110).

Long-term inhibitors were listed as

> *1) Business models in OER will remain tricky, the right mix of income streams must be found, 2) Lack of institutional policies and incentives for educators to excel in OER, 3) Models that build on teachers in the creation and sharing of OER will need to invest, considerable effort in training and support, 4) Creation of educational metadata will remain costly, 5) Need*

more advanced tools and services for educational repository (OLCOS, 2007, p.110).

Casserly (2007), in her paper about the economics of OER, she pointed out two main economic barriers for OER. First, one is lack of connectivity and computers for re-use, and content creation. The second one is "the initial high cost of content development and the later costs of maintaining and updating the content" and she indicated that these costs increase with the costs of intellectual property rights (Casserly, 2007, p.16). She claimed that the first barrier is especially encountered by developing countries and second one is faced by institutions that are publishing their educational materials newly available.

According to Carson (2006) MIT faculty members were asked to state reasons for non-participation. They most often reported insufficiently polished materials, lack of time, and concerns over the effect of OCW publication on the marketability of a book in progress (Carson, 2006, p.55)

Taking from Johns Hopkins Bloomberg School of Public Health (JHSPH) OCW experience, Kanchanaraksa, Gooding, Klaas, and Yager (2009) indicated that some instructors are reluctant to participate. They list reasons for not participating as:

> *reservations about the wide dissemination of content that is based on both their intellectual property developed over time and their accumulated expertise synthesized from years of education, concerns that others may use the course materials out of context, worries of diminished course enrolments, and trepidation about additional workload involved with developing an OCW course.*(p.42)

They also argue based on anecdotal evidence that "none of these reasons is truly valid." (p.42)

In their paper, Smith and Casserly (2006) described concerns of academics as

> *Some fear that others will appropriate their ideas without permission or credit, while others worry about potential lost revenue to their institutions*

and themselves and the cost and bother of posting and updating material (p.2)

After describing these concerns, they also claim that *"in some institutions and among many individual professors and administrators, the idea of knowledge as a public good has overridden these legitimate concerns"* (p.2).

Sclater indicated various obstacles for OER movement. He believes resistance from faculty members as the one of the major ones. He claims many reasons for this resistance and elaborates these reasons as follow. Some faculty members argue that their content is not appropriate for OERs because their disciplines require practical skills such as medicine. They fear that their content may be altered in way that they do not want. This change may reduce accuracy and quality of content but it still refers partly to them. They also concern that their content will be used by others without attribution to them (Sclater, 2011).

2.6.2 Incentives

In the context of this study, incentives can be defined as any factor which encourages faculty members to publish their course materials as OER. In OECD's study, incentives for teachers and researchers grouped into four headings:

> *1) The altruistic motivation of sharing (as for institutions), which again is supported by traditional academic values. 2) Personal non-monetary gain, such as publicity, reputation within the open community or "egoboo" as it is sometimes called. 3) Free sharing can be good for economic or commercial reasons, as a way of getting publicity, reaching the market more quickly, gaining the first-mover advantage, etc. 4) Sometimes it is not worth the effort to keep the resource closed. If it can be of value to other people one might just as well share it for free* (OECD, 2007, p.12).

In the OECD's OER study, mentioned barrier section, participants were also asked to rate what is important to them as producers of open content by using nine-scale questionnaire, from very important to unimportant. The items which were rated as the most important are "to be acknowledged as the creator of a resource when it is

used", and "when it is adapted or changed", and "to have a quality review of the resource" (p.67). As the least important factor were financial oriented items such as providing monetary gain, promotions or awards. However, since the participation rate of the OECD OER study was low, results should be interpreted carefully.

Albright (2005) list different incentives for faculty members which were suggested in UNESCO forum including adding OER to portfolios for academic promotion and tenure; providing awards for outstanding OER material, embedding open content in scholarly training and practice; developing institutional policies that encourage OER.

Sclater (2011) categorized motivations for launching an OER initiative into three categories which are altruistic, commercial, and transformational. For altruism category, freely publishing course materials provides a number of benefits for individual learners who would not otherwise have the opportunity or educational institutions especially in developing countries. For commercial category, it may increase visibility of the institution and then provide institutions with a reputation around the world. He gave the Open University UK's OpenLearn project as an example, where 7000 students registered on fee-paying courses immediately after viewing OER content. As for transformational, OER project may have positive impact on the institution's process, structure and content. For example, faculty members who publish their course materials may receive input back from other experts around the World.

On the other side, Pena (2009) sees absence of incentive for faculty members as a social barrier and she suggests to higher education institutions should arrange incentive programs in line with their teaching and learning policies so that OER is not seen as a burden for faculty members.

2.6.3 Benefits of OER

The potential of OER movement has been well documented and demonstrated in the important international (OECD, UNESCO, the EU) and national (JISC in UK, NSF in USA) organization's reports and academic literature (Sclater, 2011; Smith &

Casserly, 2006; Johnstone, 2005). In this section, benefits of OER movement are presented for different stakeholders such as self-learners, faculty members, institutions and governments.

2.6.3.1 For Self-learners

In MIT OCW evaluation report, it is found that the great majority of visitors is from self-learners with a 49%. They are general use the MIT OCW for improving personal knowledge (56%), keeping themselves up to date in field (16%), planning future study (14%) (Carson, 2006, p.3).

OER movement could provide opportunities for disadvantages people (i.e. rural communities, or women who have not find chance to access higher education) or under-developing and developing countries where there is not enough places for higher education (Sclater, 2011, p.181).

In his paper, Stacey (2007), argued that the OERs can be valuable for the individuals who are willing to educate themselves. Because it has coherent structure and individuals have widened choice for accessing educational recourses in OERs. In this environment, individuals are not responsible for tuition fees, prerequisites and strict learning methods, so he finds OERs very convenient for self-regulated and self-reliant learners. He further argues that to use a digital material by seeking permissions can take too much time (weeks, even months), on the other hand, in OERs educators can use these recourses without these time and effort taking permission procedures (Stacey, 2007).

In OECD (2007) report, it is expected that OER is likely to change the traditional teaching structure and create more independent learners. This increase the demand for assessment of the competencies gained outside of the formal learning settings.

2.6.3.2 For Faculty Members

It can be asserted that faculty members might be more advantageous group of people who can benefit from OER movement. As founded in the evaluation study conducted by MIT OCW staff, 16% of visitors are educators, 32% students, and

49% self-learners (Carson, 2006). Although percentage of educators who use MIT OCW is the lowest level, results also indicate that approximately 2 million educators have used MIT OCW and 96% of educators participated the study say MIT OCW has helped them to enhance their teaching and courses (Carson, 2007, p.24).

Johnstone, (2005) explained benefits of OER movement for faculty members by claiming that OER movement may offer new collaboration opportunities for faculty members between and across departments since viewing OER contents they can see the overlaps in contents they cover (Johnstone, 2005, p.15). She further elaborated that

> *In most of traditional campuses, most of the faculty members could not see syllabus and teaching materials of their colleagues, even in the same department. However, with the help of OER, faculty members can see how their colleagues approached the content* (Johnstone, 2005, p.15).

As underlined by D'Antoni (2009), sharing in an academic environment is an academic value that increases the personal reputation and this may bring publicity or becoming active in the market resulting economic benefits and advantages.

Preston (2006) reports a number of benefits of MIT faculty members who participated in MIT OCW initiative. Some of these benefits can be listed as

- It may increase academic recognition since their works can be viewed and used on the web,
- The faculty members can see what the other colleague were doing and can have making connections
- Students might come to classes more prepared
- To make the materials available online provide an archive for faculty members (Preston, 2006, p.1)

2.6.3.3 For Institutions

OER movement can significantly reduce curriculum development by providing both time and monetary saving. This is particularly valid for courses which include multimedia materials (illustrations, animations etc.) (Potter, 2003)

OER could help the developing curriculum for institutions in other countries in the World (Sclater, 2011, p.181). For instance, as suggested by Smith and Casserly (2006) John Hopkins School of Public Health could help design and development of public health programs in developing countries.

D'Antoni (2009) pointed out numerous benefits of OER movement for institutions. These are;

> *"Sharing knowledge is congruent with the academic tradition; Taxpayer's money is leveraged through the free sharing of resources; the cost of content development can be reduced and quality may be improved; the public image of the institution may be enhanced and new students attracted; with increasing competition, institutions need to identify new cost-recovery models"* D'Antoni (2009, p.6).

In the recent OER report of UNESCO and Commonwealth of Learning (COL), three main benefits of OER to institutions were highlighted. These are; with the OER movement, institutions can attract new students. It may increase the reputation of the institution by supporting public service role of it. By dissemination of the research results, it attracts the research funding (UNESCO- COL, in press)

2.6.3.4 For Governments

In OECD report (2007), following benefits of OER were listed for governments. These are;

> *They expand access to learning for everyone but most of all for nontraditional groups of students and thus widen participation in higher education. They can be an efficient way of promoting lifelong learning for both the individual and the government. They can bridge the gap between non-formal, informal and formal learning* (p.11)

As can be seen from the quotation from the OECD report, widening participation in higher education, promoting lifelong learning, and bridging the gap between non-formal, informal and formal learning are three major benefits for governments.

2.7 Criticisms on OER

Although its great potentials and promises, there are also some criticism about the OER movement. Main criticisms are mainly focused on its isolated structure, lack of online experience production and pedagogy and being a risk of educational neo-colonialism. As claimed by Stacey (2007), values of the some of the resources are questionable such as power point slides because they are isolated from real classroom settings. Sclater (2011), on the other hand, argues that OER is far from being a formal education setting. Because there is no cohort of students who can interact with each other and also assessment and accreditation are likely to be less engaging. Most of time delivery platform of OERs do not carry any pedagogical strategy as well (Sclater ,2011; Stacey 2007). Students cannot get an online learning experience with shared materials. Most of time they are just supportive materials for the students who want to benefit from them. It may also be not a good platform for the students who need pedagogical guidance (Gourley & Lane, 2009). The students who want to use OER should have good self-study skills to benefit from available OERs.

Another issue with OER is its potential of creation of colonism between developing and under-developing countries (Daniel, 2010). In these countries, most of time available courses which were developed in Western countries are translated and used. This might cause elimination of contextual values and a stereotyped value which was assimilated by Western countries (Johnstone, 2005).

2.8 Implications of Literature Review

As shown in the literature review section of the study, OER movement has great potentials. Those potentials can address different problems in Turkish context. However, there is no available academic study conducted about OER movement in Turkey. By using scientific research methods, it is expected that as a first PhD. study about OER in Turkey, the present study can be a base for forthcoming studies to be conducted in near future.

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CHAPTER III

METHODOLOGY

3.1 General Research Design

A multimethod research design, a quantitative methodology (survey research design) and qualitative methodology (multiple-case research design), each complete in itself and addressing different research questions of the study, was performed in the present study. As clearly elucidated by Morse (2003), difference between multimethod and mixed methods design is that "in multimethod design all projects are complete in themselves" (Morse, 2003, p.199). He further indicates that unlike mixed method, in multimethod design, "each study is planned and conducted to answer a particular sub question" (p.199). In mixed method design, on the other hand, research questions are emerged from previous part of the study and they are integrated one or more phases of the study (Teddlie & Tasshakori, 2003).

This study fits well with the multimethod design rather than mixed method. First of all, this study is consisted of two separate studies which are complete on their own. Second, each part is designed to answer a particular sub-question. In addition, the sample of the first part of the study is different from the second part. That is, the first part sample of the study is consisted of faculty members who are eligible to give undergraduate level courses in higher education. Second part of the study, on the other hand, involves different sample of individuals who are practitioners of the pioneer initiatives in Turkish higher education. Next, they are interrelated with each other since each part conducted within umbrella of the general purpose of the study, which is providing research base guideline for policymakers about OER movement. Finally, results are integrated together at the final stage of the study. As a result, when all these points considered together, it is safe to say the study suits well with the multimethod design. By the help of multimethod approach, the researcher is able to look at the OER movement in a broader perspective.

Figure 3.1 represents the general structure of the study.
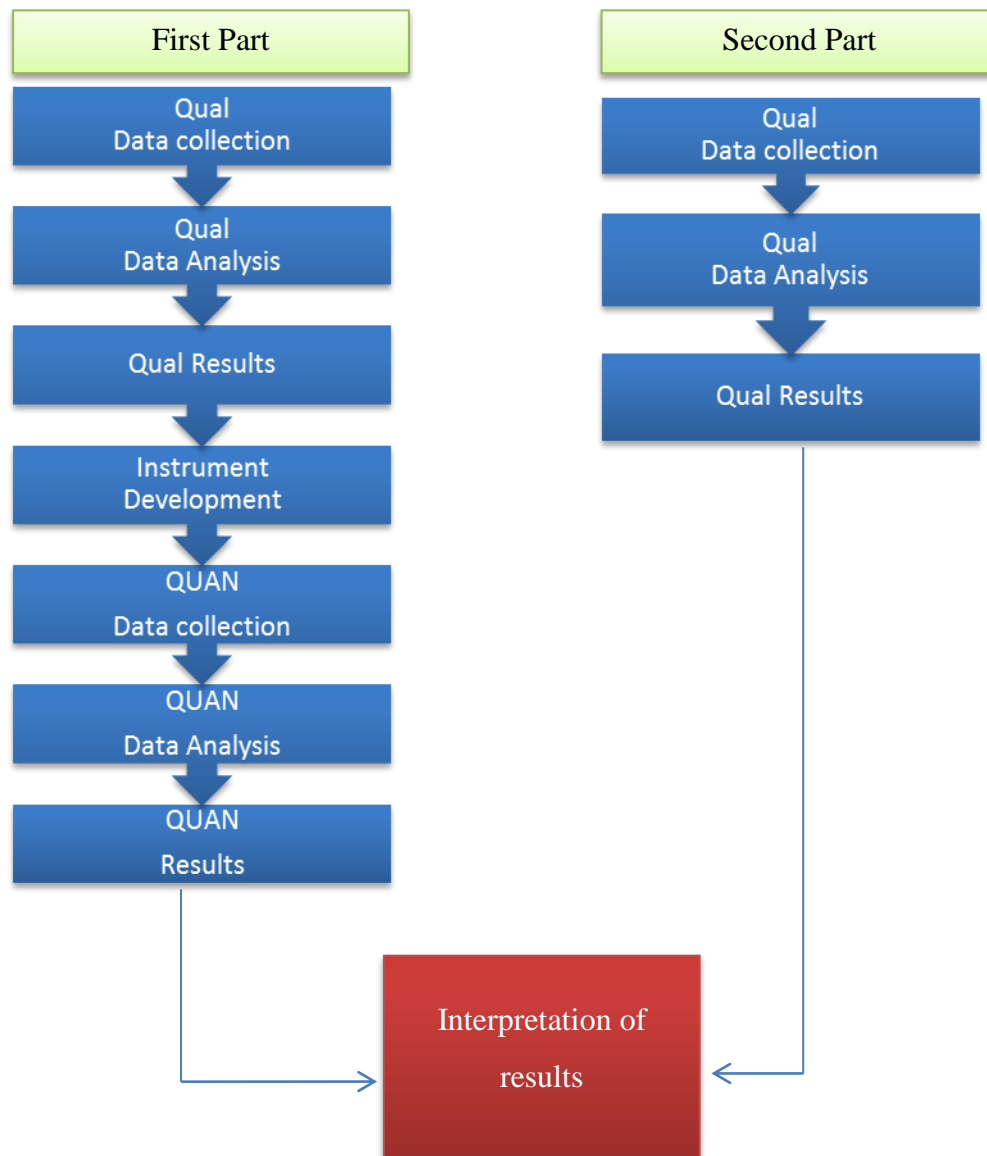
Figure 3.1 Research design of the study

3.1.1 Research Questions

1. What are the <u>perceived</u> <u>barriers</u> for faculty members to share their course
    materials?

a. Is there a significant difference between faculty members' perceived barriers for sharing course materials in regard to institute, academic experience, willingness to publish, course load, and university type?

2. What are the <u>perceived</u> <u>incentives</u> for faculty member to share their course materials?

    a. Is there a significant difference between faculty members' perceived incentives for sharing course materials in regard to institute, academic experience, willingness to publish, course load, and university type?

3. What are the <u>perceived</u> <u>values of sharing course materials</u> for faculty members?

4. What do OER practitioners in three national initiatives experience during the implementation of OER project in their own institution?

    a. What were the challenges that have been confronted by practitioners during implementation of OER projects in three national initiatives?

        i. What were the main reasons behind for these challenges?

    b. What were the strategies that have been applied during the implementation of OER projects in three national initiatives?

Table 3.1 Data resources, data collection instruments, types of data, types of data analysis for each RQs

Research Quest. (RQs)	Data Sources	Data Collection Instrument	Types of data	Data analysis
RQ1 (Barriers)	Faculty members	The questionnaire	Quan	-Descriptive -Factor analysis -ANOVA
RQ2 (Incentives)	Faculty members	The questionnaire	Quan	-Descriptive -Factor analysis -ANOVA
RQ3 (Benefits)	Faculty members	The questionnaire	Quan	-Descriptive -Factor analysis -ANOVA
RQ4.a (Challenges)	OER Practitioners	Interview schedule	Qual	-Content Analysis
RQ4.b (Strategies)	OER Practitioners	Interview schedule	Qual	-Content Analysis

3.2 PART I (Survey Study)

In this part of the study, a survey method was utilized to gather descriptive information about the barriers, incentives, and benefits of OER movement from the perspective of faculty members in Turkey. Survey research is a widely used quantitative design and one of the popular research designs in education. In this design, researchers administer a survey to a sample or population in order to understand the "attitudes, opinions, behaviors, or characteristics of the population" (Creswell, 2005, p.354)

3.2.1 Subjects

The population used in this study consisted of the faculty members working in National OpenCourseWare Consortium (UADMK) member universities and taught at least one higher education level course. At the time survey administrated, there were fifty-six UADMK member universities. The subjects hold variety of academic titles ranging from research assistant to professor. By using an online survey, the researcher intended to access entire population since this is an online survey which enable to access wide range of subjects easily. Responses who do not meet the criteria indicated above were deleted during the data cleaning procedure.

In UADMK member universities, there are 73,954 faculty members for the 2009-2010 academic year (ÖSYM, 2011), but it is not possible to determine number of faculty members giving at least one higher education level course. As shown in Table 3.2 The number of faculty member by academic title and gender for the 2009-2010 academic year, among 73,954 faculty members 31,119 (42.08%) of the faculty members are female 42,835 (57.92%) of them are male. In relation to academic title of the faculty members, 27,222 (36.81%) of them are Research Assistant 13,637 (18.44%) of them are Assistant Professor, and 8,764 (11.85%) of them are Instructor, 11,247 (15.21%) of them are Professor, 5,734 (7.75%) of them Associate Professor 5,143 (6.95%) of them are Language Instructor 2,183 (2.95%) of them are Specialist and 24 (0.04%) of them are other. Table 3.2 shows distribution of the faculty members by academic title and gender.

Table 3.2 The number of faculty member by academic title and gender for the 2009-2010 academic year (ÖSYM, 2011)

	Total		Female		Male	
	f	%	*f*	%	*f*	%
Prof.	11247	15.21	3282	4.44	7965	10.77
Assoc. Prof.	5734	7.75	1903	2.57	3831	5.18

Table 3.2 (cont'd)

Asst. Prof.	13637	18.44	4944	6.69	8693	11.76
Instructor	8764	11.85	3698	5	5066	6.85
Language Instructor	5143	6.95	3127	4.23	2016	2.73
Specialist	2183	2.95	1036	1.40	1147	1.55
Research Assistant	27222	36.81	13112	17.73	14110	19.08
Translator	12	0.02	10	0.014	2	0.003
Ed. & Trang. Planner	12	0.02	7	0.009	5	0.007
Total	73954	100	31119	42.08	42835	57.92

3.2.2 Instrument Design

As a challenging and complex process, designing good survey instrument is not an easy task (Creswell, 2005). The questions for the questionnaire (Appendix A, B) in the present study were developed as a result of various investigative phases. Although some of the steps in instrument development were sequential, there were some other steps which continue throughout the development process. Literature review, for example, is an ongoing process throughout the study. Figure 3.2 illustrates the main stages followed, not necessarily sequential, throughout the instrument development process of the study.

First draft of the survey

First pilot study at a national academic conference (items with open-ended questions)

Expert reviews (three consortium executive members)

Conducting literature review

OER activities

Organizing items

Determine main dimensions of the survey. Initial items from OECD's survey

Analyzing interviews & generating items

Interviews with UADMK member representatives

Figure 3.2 Instrument development stages

Conducting actual survey

Sending invitation letter to consortium member university administration

Second pilot study at a national academic conference (41 responses)

Getting permission from METU ethical committe

One Turkish language expert review

Transferring the survey into online aligned with visual design principles

OER activities

Conducting literature review

Two measurement and evaluation experts review

New items generated from first pilot study

After the first pilot study

In-depth interviews with 10 Faculty Membs. (five are willingly to share, five not willingly to share)

Analyzing interviews & generating items

Expert review, three hold PhD in IT, five were PhD. cand. in IT one was in EDS

Figure 3.2 (cont'd)

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3.2.2.1 Literature Review for Instrument Development

Initial items in the questionnaire were based on the questionnaire in the OECD's report entitled Giving Knowledge for Free (OECD, 2007). However, there is no information about reliability and validity of this questionnaire in this report. There are also a number of studies (Caswell, Henson, Jenson & Wiley 2008; Hylen 2006; OECD 2007; Pelizzari, 2003; Matkin 2006; OLCOS, 2007; Atkins, Brown & Hammond, 2007; Bissell & Boyle, 2007; Yuan, MacNeill & Kraan, 2008; Matkin, 2006; Smith & Casserly, 2006.) which provided input for the questionnaire throughout the instrument development process.

3.2.2.2 Interview with University Representatives

Five semi-structured interviews were conducted with five UADMK member university representatives. These participants were selected since they are the key informants about the OER movement in their respective universities. The questions were general and related to benefits, barriers and the future of the OER project in Turkey. The interviews were conducted at UADMK general meeting at Bilkent University in 09.11.2007. Interview protocol can be found in Appendix C.

3.2.2.3 Interview with Faculty Members

Ten semi-structured interviews were conducted with faculty members half of whom are already publishing their course materials and half of whom are not willing to share their course materials freely. While determining participants, more than one sampling strategy (Patton, 1991) was administrated. That is, both criterion and snowball sampling strategies were employed while determining faculty members with whom to conduct interviews. Faculty members who are already publishing their course material and faculty members who are not willing to share their course materials were used as criteria. Besides this, a snowball sampling strategy was used for selecting information reach cases (Patton, 1991). In this study, participants were selected through asking "well-situated people" to find information reach cases. All participants were from different departments at Middle East Technical University. Table 3.3 shows number of participants and their departments.

Table 3.3 Interview participants and their departments

# of participants	Department
2	Computer Education and Instructional Technology
2	Elementary Education
1	Civil Engineering
1	Educational Sciences
1	Mechanical Engineering
1	Computer Engineering
1	Physics
1	Educational Sciences

Two different interview protocols were developed by the researcher. One is for faculty members who are already publishing their course materials (Appendix D) and another is for faculty members who are not willing to share their course materials freely (Appendix E). Prepared schedule was also controlled by two experts one in the qualitative research area another one in Open Educational Resources area. Interview protocol were also examined by three peers (PhD. students). Two pilot interviews were performed before conducting actual interviews. All of these strategies were used to ensure understandability of the questions and to gather accurate data via the instrument. The interviews were conducted face-to-face. The interviews were digitally recorded for the purposes of coding and analysis and to ensure accuracy. Interviews took about 25-30 minutes.

The following themes are common points which direct the interview questions multiple-case

- ✓ Background information about interviewee
- ✓ Main barriers that prevent OER movement
- ✓ Underlying reasons that make faculty members publish their course materials
- ✓ Possible incentives/enablers that accelerate diffusion of OER movement
- ✓ Negative consequences of OER movement

✓ Strategies that should be implemented for providing sustainability of the OER movement

3.2.2.4 OER Activities

It is also crucial to underline that activities about OER movement in Turkey that the research attended also helped the reshaping of the questionnaire. These activities are weekly UADMK executive member meetings, UADMK general meetings (held in three times in Ankara) and promotional meeting held in the context of an academic conferences (Inet-TR Conference held in Bilkent University on December, 2007, Academic Computing held in Çanakkale on January, 2008 and held in Şanlıurfa, on February, 2009). For instance, topics of discussion or questions asked by faculty members in these activities enabled the researcher to add new items to the questionnaire or revise the existing items in the questionnaire.

3.2.2.5 Pilot Studies

Two pilot studies were conducted at nationwide academic conferences because participants of these conferences assumed to represent the actual population of the study. In the first pilot test, items were provided with open-ended questions for each section to get feedback from individuals who complete and evaluate the instrument. Pilot testing helps researchers to decide that respondents of the survey are capable of completing the survey and that they understand the questions (Creswell, 2005). In this first pilot study, some of the participants also expressed their ideas about the questionnaire verbally, as well. In the second pilot test, only at the final section there was an open-ended question which asks their general comments about OER movement and the questionnaire.

3.2.2.6 Transforming the Instrument into Online Version

Visual design principles were taken into consideration in this process. To do this, alignment of the items and scales were carefully arranged. To differentiate the items from each other, different colors were used in section 2, section 3 and section 4. To minimize missing data, participants are not allowed to pass other section of the questionnaire without answering all the items in section 2, section 3 and section 4. Informative feedback was also carefully designed (Figure 3.3). For example, if there

are incomplete responses and if those responses are compulsory, well-structured warning message with a proper color and sign were presented when the subjects clicked the next button (Dillman, 2000). In the first and last part of the survey, questions were highlighted with yellow color when mouse come over the questions which provided a visual aid to participants. Survey was developed in www.surveymonkey.com, a commercial service for survey development. After developing online survey, it was tested with different Internet browsers (Mozilla, Chrome etc.) and a think aloud procedure was conducted with two PhD. students in instructional technology field. Online survey was also controlled by thesis committee members and one measurement and evaluation expert.

Figure 3.3 A snapshot from the actual online survey

[SURVEY PREVIEW MODE] Öğretim Elemanları'nın Ders Kaynaklarının Paylaşılması ile İlgili Görüş ve Algıları... Survey - Google Chrome

www.surveymonkey.com/s.aspx?PREVIEW_MODE=DO_NOT_USE_THIS_LINK_FOR_COLLECTION&sm=Lh%2FbIdC%2brf6KqCVdYuXZwpYesDFvAJFvv7e8w2TZsP24%3d#q1

Öğretim Elemanları'nın Ders Kaynaklarının Paylaşılması ile İlgili Görüş ve Algıları...

3. BÖLÜM (Teşvik Edici Yöntemler/Kolaylaştırıcılar)

60%

Bir ya da birden fazla maddeye cevap vermemiş gözüküyorsunuz! Diğer bölüme geçebilmek için, lütfen tüm maddeleri işaretleyiniz.

* Ders kaynaklarının internet üzerinden herkesin erişimine açık olarak yayınlanmasına ilişkin teşvik edici yöntemler aşağıda listelenmiştir. Lütfen sizin için en uygun seçeneği, sunulan "altı basamaklı ölçekte" işaretleyerek belirtiniz.

	Hiç Katılmıyorum =1	Katılmıyorum =2	Kısmen Katılmıyorum =3	Kısmen Katılıyorum=4	Katılıyorum=5	Tamamen Katılıyorum=6
	1	2	3	4	5	6
1. Öğretim elemanlarının kendi dersleri ile ilgili ders kaynağı geliştirmesi için maddi destek (telif ücreti gibi) sağlanmalıdır.		✓				
2. Öğretim elemanlarına kendi dersleri ile ilgili materyal geliştirilmesi için donanımsal destek (bilgisayar, tarayıcı vb.) sağlanmalıdır.		✓				
3. Öğretim elemanlarının kendi dersleri ile ilgili materyal üretme çabaları akademik yükseltme kriterleri arasına alınmalıdır.		✓				
4. Fakültelere ya da rektörlüğe bağlı materyal geliştirmeyi destekleyici merkezler kurulmalıdır.		✓				
5. Öğretim elemanlarına kendi dersleri ile ilgili materyal üretebilmesi için eğitimler verilmelidir.		✓				
6. Ders kaynaklarının paylaşımı için kullanımı kolay bir ortam oluşturulmalıdır.		✓				
7. Öğrencilerin asistanlığıyla/yardımıyla, öğretim elemanlarına destek sağlanmalıdır.		✓				
8. Ders kaynaklarını paylaşmak zorunlu olmalıdır.		✓				
9. Ders kaynakları ülke genelinde tek bir platformdan (örn: ULAKBİM) yayınlanmalıdır.		✓				
10. Paylaştığım ders kaynakları hiçbir şekilde değiştirilmemelidir.		✓				
11. Paylaştığım ders kaynakları aşırılmaya (intihale) karşı korunmalıdır.						

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3.2.3 Structure of the Questionnaire

There were five sections (general questions, barriers, incentives, benefits and demographics) in the questionnaire In the actual survey distributed to participants, those taking part rated their level of agreement on the 6-point unipolar, without midpoint, likert scale for each item (6 indicating "Totally Agree", 5 indicating "Agree", 4 indicating "Somewhat Agree", 3 indicating "Somewhat Disagree", 2 indicating "Disagree" and, 1 indicating "Totally Disagree"). Krosnick and Fabrigar (1997) suggest optimal length of scale as 5 to 7 points. They recommend using scale of this length since this length is likely to be more reliable and valid than shorter and longer scales (Krosnick & Fabrigar, 1997, p.148). In terms of mid-points, though deciding to use midpoint is not clear as much as length of scale in the literature, theory of satisficing suggest that measurement quality may be decreased by using midpoint. This theory claims that many people tend to select midpoint because this provides participants with an easy choice without spending cognitive efforts to respond (Krosnick & Fabrigar, 1997).

The first part (Appendix F) includes general questions about using and publishing course materials through the Internet and consists of seven questions. The second third and fourth parts of the survey are related to barriers (Appendix G), incentives (Appendix H) and benefits (Appendix I), respectively and lastly the fifth part collects demographic information about the participants (Appendix J). These are gender, department, title, academic experience, Institute, university, computer and internet use per week, course load, name, surname, e-mail, phone and an open ended question for their comments. There are 13 items in the second part of the survey (barriers), 16 items (incentives) in the third part and 17 items (benefits) in the fourth part of the survey.

In each section of the questionnaire, there is a progress bar which indicating completeness of the survey in percentage (Figure 3.3). Users were not allowed to pass next section of the questionnaire if mandatory questions were not answered. In the first part, there are only two mandatory questions, in the second, third and fourth parts all items are mandatory and finally in demographic part there are four mandatory questions.

3.2.4 Implementation of the Questionnaire

Before administrating the survey, an official permission (Appendix K) was taken from Research Center for Applied Ethics at Middle East Technical University (METU). An online survey was designed and sent to the fifty-six Turkish OCW consortium member universities' administration through a formal letter signed by the chair of UADMK (Appendix L). Background information of the study and the web links directed the users to the questionnaire were presented in this formal letter. In this letter an announcement paragraph was also included. The questionnaire was administrated in two rounds. In the first round, the formal letter was send to 47 UADMK member university administration (Appendix M). During this period, 9 university (Appendix N) was joined the consortium, so the formal letter was send to these universities as well. In the second round, another formal letter (Appendix O) was sent to 36 UADMK member universities (Appendix P) whose response rate is low in the first round.

3.2.5 Validity of the Questionnaire

Fraenkel and Wallen (2000) define validity as "appropriateness, correctness, meaningfulness and usefulness" (p.169) of inferences made based on collected data. In validity, the important point is that "we make sure that our test is measuring what we intent it to measure for the particular people in a particular context and that the interpretations we make on the basis of the test scores are correct" (Johnson & Christensen, 2004, p.140). There are different types of validity and each requires providing different evidence. Types of validity can be mainly categorized as content-related evidence of validity, criterion-related evidence of validity, and construct-related evidence of validity (Fraenkel & Wallen, 2000). In this study, content-related validity and construct-related validity were considered. The content-related validity is not only dealt with item content, but it is also involves "formatting, wording, administration, and scoring of the test" (Johnson & Christensen, 2004, p.142). Thus, the evidence of content and face validity of the instrument was provided by expert opinions and an extensive literature review. Construct-related validity, on the other hand, was determined by factor analysis and was applied on section 2 (barriers), 3 (incentives) and 4 (benefits).

3.2.5.1 Content-Related Validity for the Instrument

The content and face validity of the questionnaire was provided by subject and measurement expert reviewers who commented on the instrument in terms of content and format. To do this, the questionnaire was examined by six Turkish OCW consortium executive members, three academicians who hold a PhD. in the Instructional Technology field, and six PhD. candidates, five of whom are undertaking their PhD. in instructional technology and one of them is doing his PhD. in educational science. In addition to that, two evaluation and assessment experts reviewed the questionnaire twice in terms of types of scales, structure of the questions and appropriateness of the direction of the survey. Next, a Turkish language expert reviewed the survey with respect to the Turkish language. Finally, thesis committee approved the survey on the pilot data.

3.2.5.2 Construct-related Validity for Barrier Section

A factor analysis is a very useful technique for examining internal structure (construct) of instruments (Johnson & Christensen, 2004). Thus, in the present study, an exploratory factor analysis (EFA) was performed to examine whether there is a single or multiple dimensions underlying the items in three parts of the questionnaire. EFA was used with the help of PAW SPSS v18.0 package program. However, before explaining steps followed for EFA, it is important to indicate that EFA was performed on actual survey data set instead of pilot testing result because sample size (N=41) is not appropriate to run EFA.

First of all, data was scrutinized to control the missing values and outliers. Then, correlation matrix was reviewed in order to make preliminary judgment about data and to see appropriateness of data for conducting factor analysis. Next, assumptions were checked to make decision about whether data is appropriate to conduct further analysis on data or not.

Before doing factor analysis, a reliability analysis with 13 items was performed to examine item corrected total correlation. This test gives us evidence about homogeneity of the instrument that is a sign of internal structure of the instrument. "If all the items were correlated with the total test scores, you would have evidence

that the test was internally consistent..." (Johnson & Christensen, 2004, p.144). A corrected total correlation lower than .25 (George & Mallery, 2001) shows problem with internal consistency. All items, except BSS3, have a corrected item correlation higher than .25. Since item B2S3 has a corrected item correlation .24, this item did not deleted because of very close the acceptable lowest corrected item correlation score, .25.

3.2.5.2.1 Correlation Matrix

To make a preliminary judgment on the factorial structure, correlation matrix was examined. According to Hair, Anderson, Tatham and Black (1998), correlations among observed variables should exceed .30. In the data, each observed variable has correlation values exceeding .30 .

3.2.5.2.2 Assumptions:

Bartlett's Test of Sphericity is used to see the presence of correlations among variables, and it is expected to be significant (Hair et al, 1998). In this study, χ^2 (79) = 5797.22, p=.000 is significant (Table 3.4).

Table 3.4 Bartlett's Test of Sphericity Tests for barrier section

Bartlett's Test of Sphericity	Approx. Chi-Square	5797.22
	Df	79
	Sig.	.00

Since it was not possible to measure multivariate normality, this assumption was tested by univariate normality. In order to check this assumption, the Skewness and Kurtosis values were examined and their values did not exceed +3.26 and -3.26. So, according to Skewness and Kurtosis values, normality assumption is also provided.

3.2.5.2.3 Sample Size:

In this study, data set gathered from real survey administration was used to validate construct validity of the instrument since pilot testing was not yielded sufficient sample size (N=41) to be able to conduct factor analysis. A wide range of recommendations about sample size in factor analysis has been suggested. While some of them evaluating given absolute number of sample size (N), others take into consideration to ratio of sample size to number of variables which are analyzed (p) (MacCallum, Widaman, Zhang & Hong, 1999). In this study, it can be comfortably said that the sample size (N=1637) is appropriate for conducting factor analysis since it fits with a lot of criteria indicated in the literature.

3.2.5.2.4 Extraction Technique

As an extraction technique, maximum likelihood, not principal component analysis (PCA), was used since PCA ignores unique variance and error variance during the analysis. Actually, this method is the most appropriate when the primary goal is to make prediction and when related literature indicates that unique and error variance explains a relatively small portion of total variance (Hair, Anderson, Tatham & Black, 1998). However, in this case, the primary objective was to identify the latent dimensions represented in the original variables and the researchers have little knowledge about unique and error variance so the researcher used to eliminate this variance by using maximum likelihood method instead of PCA (Hair et. al, 1998).

3.2.5.2.5 Number of Factors

According to Velicer and Jacson (1990) in spite of its common usage among researcher, eigenvalues values greater than 1.00 "is among the least accurate methods for selecting the number of factors to retain" (as cited in Costello & Osborne, 2005, p.2). Therefore, the researcher decided how many factors to retain for rotation by not only relying on eigenvalues values greater than 1.00, but also used scree test while determining factors to retain for rotation. Table 3.5 Eigenvalues, variance and cumulative percentages of factors implies that four factors are much fitted to data according to eigenvalues exceeding 1.00. Scree plot also shows that the curve is straightened after fifth factor, so there are four factors (Figure 3.4). Four factors are revealed distinctively and these factors can explain 62.36% of variance.

Table 3.5 Eigenvalues, variance and cumulative percentages of factors

Factors	Eigenvalues	% of Variance	Cumulative %
1	3.74	28.79	28.79
2	1.81	13.93	42.72
3	1.45	11.13	53.85
4	1.11	8.52	62.36
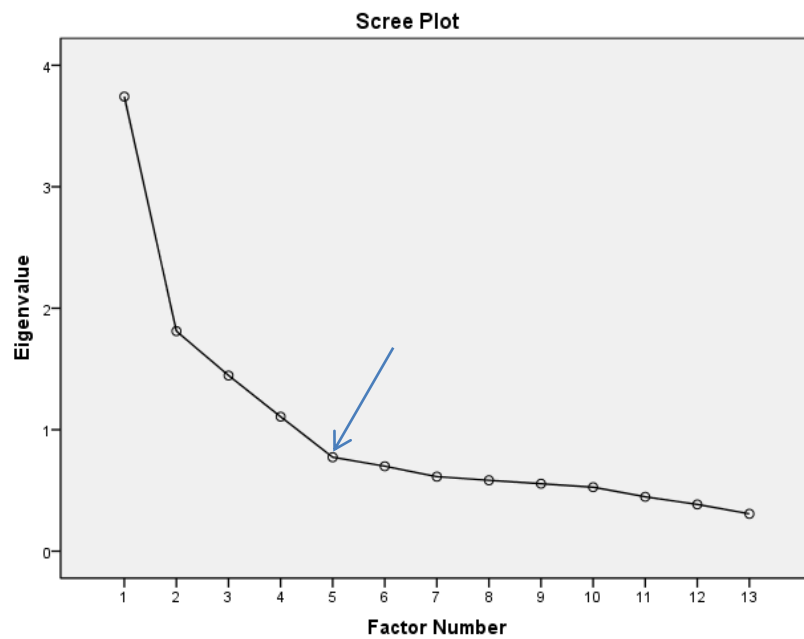
Figure 3.4 Scree plot for barrier section of the instrument

3.2.5.2.6 Rotation:

Since the present study takes place in educational science context it is normal to expect some correlation among factors, and therefore an oblique rotation technique is undertaken in order to assist in the interpretation of results (Tabachnick & Fidell, 2007; Preacher & MacCallum, 2003; Costello & Osborne, 2005). Table 3.6 was examined to see which items were loaded to specific factors. Factor loading less than .30 (Stevens, 2002) were suppressed and not taken into consideration for the analysis.

It is clear that items B2S4 and B2S3 were loaded to Factor 1; items B2S11, B2S10, B2S12, B2S13, and B2S5 were loaded to Factor 2; items B2S8, B2S7, B2S2, and B2S9 were loaded to Factor 3 and finally items B2S1 and B2S6 were loaded to Factor 4. Factor 1 was named as "technical barriers", factor 2 was named as "institutional barriers", factor 3 was named as "legal barriers" and finally factor 4 was named as "personal barriers".

As can be seen in Table 3.6 factor loading of item B2S5 is low (3.64) so it does not fit very well under this factor. Though it can be deleted, the researcher did not prefer this option since it is the third greatest barrier in the barrier section of the questionnaire. So it is worth to mention about this barrier in the result section of the study.

Table 3.6 Factor loadings of barrier section of the instrument

Item Number	Factor Loadings			
	Factor 1	Factor 2	Factor 3	Factor 4
B2S4	1.028			
B2S3	.435			
B2S11		.869		
B2S10		.835		
B2S12		.607		
B2S13		.517		
B2S5		.364		
B2S8			.876	
B2S7			.722	
B2S2			.558	
B2S9			.465	
B2S1				.667
B2S6				.603

3.2.5.3 Construct-related Validity for Incentive Section

The same steps were followed to provide construct-related validity for the incentive section of the instrument. Prior the factor analysis, a reliability analysis with 16 items was administrated to examine item corrected total correlation. This test gives us evidence about homogeneity of the instrument which is a sign of internal structure of the instrument. A corrected total correlation lower than .25 (George & Mallery, 2001) shows problem with internal consistency. All items have a corrected item correlation higher than .25. Hence, there is no problem with internal consistency of the instrument.

3.2.5.3.1 Correlation Matrix

Again to make a preliminary judgment on the factorial structure, correlation matrix was examined. According to Hair, Anderson, Tatham and Black (1998), correlations among observed variables should exceed .30. In the data, each observed variable has correlation values exceeding .30.

3.2.5.3.2 Assumptions:

Bartlett's Test of Sphericity is used to see the presence of correlations among variables, and it is expected to be significant (Hair et al, 1998). In this study, χ^2 (120) = 7549.57, p=.000 is significant (Table 3.7).

Table 3.7 Bartlett's Test of Sphericity Tests

Bartlett's Test of Sphericity	Approx. Chi-Square	7549.57
	Df	120
	Sig.	.00

Since it was not possible to measure multivariate normality, this assumption was tested by univariate normality. In order to check this assumption, the Skewness and

Kurtosis values were examined and Kurtosis value of B3S11 and B3S14 exceed +3.26. So normality assumption is not provided for these items. Therefore, since normality assumption was violated, as indicated by Fabrigar, Wegenner, MacCallum & Strahan (1999), principal axis factors method was administrated instead of maximum likelihood method.

3.2.5.3.3 Sample Size:

In this study, date set gather from real survey administration was used to validate construct validity of the instrument since pilot testing was not yielded sufficient sample size (N=41) to be able to conduct factor analysis. A wide range of recommendations about sample size in factor analysis has been suggested. While some of them evaluating given absolute number of sample size (N), other take into consideration to ratio of sample size to number of variables which are analyzed (p) (MacCallum, Widaman, Zhang & Hong, 1999). In this study, it can be comfortably said that the sample size (N=1637) is appropriate for conducting factor analysis since it fits with many criteria indicated in the literature.

3.2.5.3.4 Extraction Technique

Because normality assumption was violated, as indicated by Fabrigar et al. (1999), principal axis factors method was administrated instead of maximum likelihood method.

3.2.5.3.5 Number of Factors

The researcher decided how many factors to retain for rotation by not only relying on eigenvalues values greater than 1.00, but also used scree test while determining factors to retain for rotation. Table 3.8 implies that four factors are much fitted to data according to eigenvalues exceeding 1.00. Scree plot also shows that the curve is straightened after fifth factor, so there are four factors (Figure 3.5). Four factors are revealed distinctively and these factors can explain 56.19% of variance.

Table 3.8 Eigenvalues, variance and cumulative percentages of factors

| Factors	Eigenvalues	% of Variance	Cumulative %
1	4.84	30.25	30.25
2	1.73	10.78	41.03
3	1.33	8.33	49.36
4	1.09	6.83	56.19
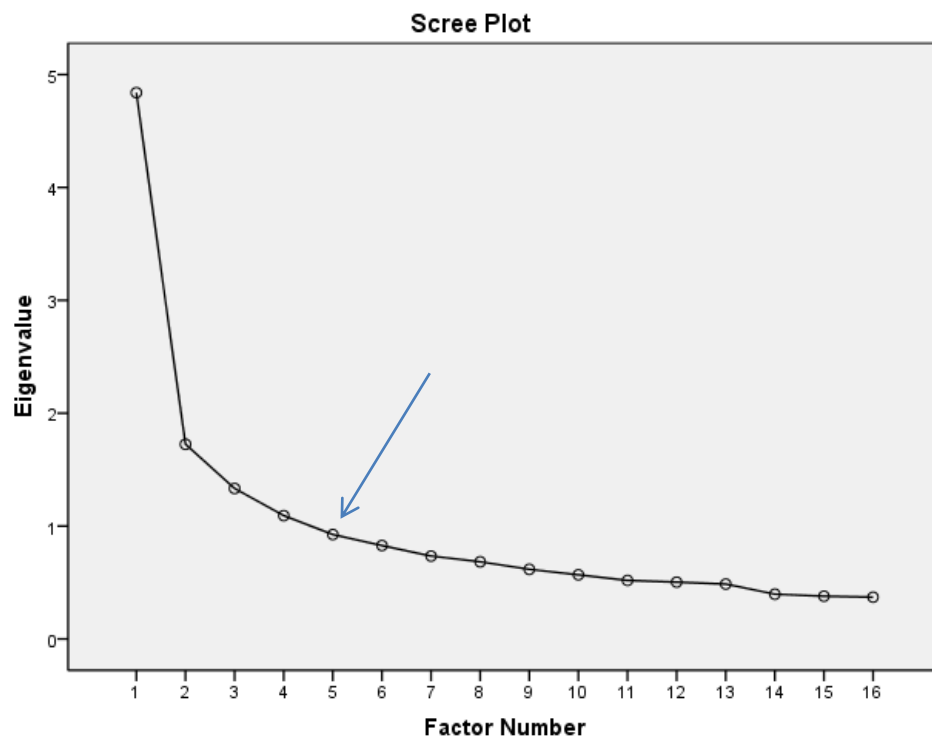
Figure 3.5 Scree plot for incentive section of the instrument

3.2.5.3.6 Rotation

Since the present study takes place in educational science context it is normal to expect some correlation among factors, and therefore an oblique rotation technique is undertaken in order to assist in the interpretation of results (Tabachnick & Fidell,

2007; Preacher & MacCallum, 2003; Costello & Osborne, 2005). Table 3.9 was examined to see which items were loaded to specific factors. Factor loading less than .30 (Stevens, 2002) were suppressed and not taken into consideration for the analysis.

It is clear that items B3S5, B3S6, B3S4, and B3S7 were loaded to Factor 1; items B3S14, B3S11, B3S13, B3S10, B3S12 and B3S15 were loaded to Factor 2; items B3S8 and B3S9 were loaded to Factor 3 and finally items B3S1, B3S3, B3S2 and B3S16 were loaded to Factor 4. Factor 1 was named as "supporting mechanisms", factor 2 was named as "intellectual property protection mechanisms", factor 3 was named as "compelling mechanisms" and finally factor 4 was named as "reward mechanisms". When factors and items that go under those factors were examined, it is noted that three items (B3S7, B3S12, and B3S15) has a low factor loading, which is about .30. Though these loadings can be acceptable, it is important to meaningfully associate these items with related factors. After examine these items, the researcher decided to delete two items under factor 2 (intellectual property protection mechanisms) since it is difficult to meaningfully associate these items with related factor.

Table 3.9 Factor loadings of incentive section of the instrument

Item Number	Factors loadings			
	Factor 1	Factor 2	Factor 3	Factor 4
B3S5	.792			
B3S6	.708			
B3S4	.673			
B3S7	.337			
B3S14		.778		
B3S11		.650		
B3S13		.574		
B3S10		.559		
B3S12		.345		
B3S15		.302		
B3S8			.603	
B3S9			.594	
B3S16				.674
B3S1				.663
B3S3				.633
B3S2				.377

3.2.5.4 Construct-related Validity for Benefit Section

The same steps were followed to provide construct-related validity for the benefit section of the instrument. A reliability analysis with 16 items was administrated to examine item corrected total correlation. This test gives us evidence about homogeneity of the instrument which is a sign of internal structure of the instrument. A corrected total correlation lower than .25 (George & Mallery, 2001) shows problem with internal consistency. All items have a corrected item correlation higher than .25. Hence, there is no problem with internal consistency of the instrument.

3.2.5.4.1 Correlation Matrix

Again to make a preliminary judgment on the factorial structure, correlation matrix was examined. According to Hair, Anderson, Tatham & Black (1998), correlations among observed variables should exceed .30. In the data, each observed variable has correlation values exceeding .30.

3.2.5.4.2 Assumptions

Bartlett's Test of Sphericity is used to see the presence of correlations among variables, and it is expected to be significant (Hair et al, 1998). In this study, χ^2 (136) = 22151.18, p=.000 is significant (Table 3.10). So this assumption is also provided.

Table 3.10 Bartlett's Test of Sphericity Tests

Bartlett's Test of Sphericity	Approx. Chi-Square	22151.18
	Df	136
	Sig.	.00

Since it was not possible to measure multivariate normality, this assumption was tested by univariate normality. In order to check this assumption, the Skewness and Kurtosis values were examined and Kurtosis values for number of items exceed +3.26. So normality assumption is not provided for these items. Therefore, since normality assumption was violated, as indicated by Fabrigar et al. (1999), principal axis factors method was administrated instead of maximum likelihood method in factor analysis.

3.2.5.4.3 Sample Size

In this study, date set gathered from real survey administration was used to validate construct validity of the instrument since pilot testing was not yielded sufficient sample size (N=41) to be able to conduct factor analysis. A wide range of recommendations about sample size in factor analysis has been suggested. While some of them evaluating given absolute number of sample size (N), other take into consideration to ratio of sample size to number of variables which are analyzed (p) (MacCallum, Widaman, Zhang & Hong, 1999). In this study, it can be comfortably said that the sample size (N=1637) is appropriate for conducting factor analysis since it fits with a lot of criteria indicated in the literature.

3.2.5.4.4 Extraction Technique

Because normality assumption was violated, as indicated by Fabrigar et al. (1999), principal axis factors method was administrated instead of maximum likelihood method.

3.2.5.4.5 Number of Factors

Table 3.11 implies that two factors are much fitted to data according to eigenvalues exceeding 1.00. However, scree plot shows that the curve is straightened after second factor, so there is only one factor exist in this section of the instrument (Figure 3.6). As a result, only one factor is revealed distinctively and this factor can explain 59.42% of variance.

Table 3.11 Eigenvalues, variance and cumulative percentages of factors

| Factors	Eigenvalues	% of Variance	Cumulative %
1	10.102	59.421	59.421
2	1.065	6.267	65.688
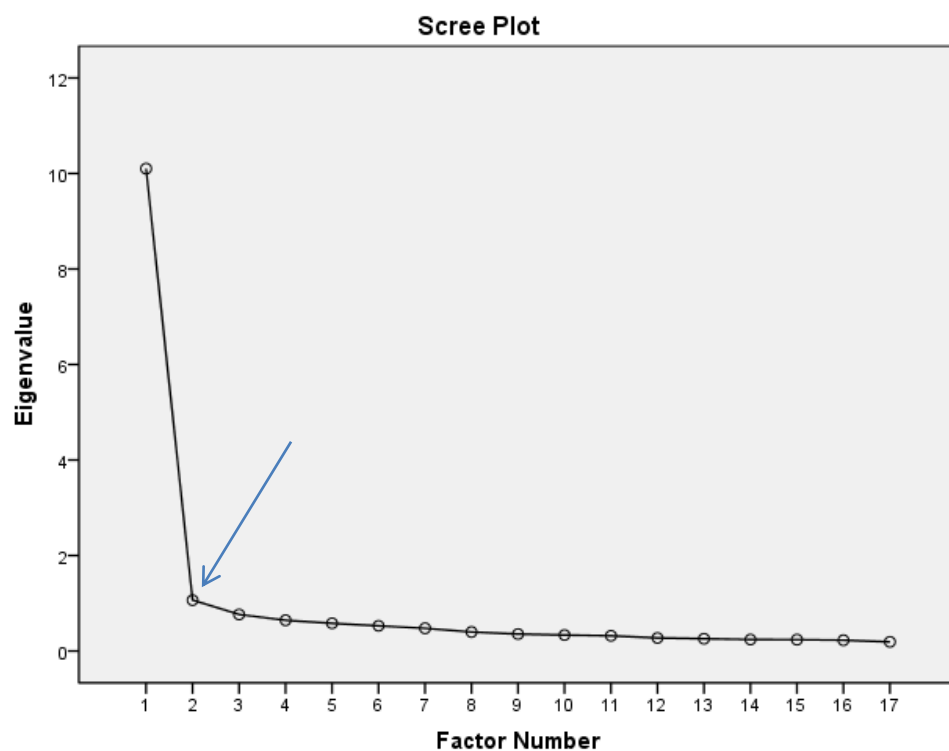
Figure 3.6 Scree plot for benefits section of the instrument

3.2.6 Reliability of the Questionnaire

Validity and reliability are the concepts that are closely associated with each other. Reliability is essential for validity, but good reliability does not mean to yield valid inferences (Gall, Gall & Borg, 2003). Unreliable data, on the other hand, cannot lead to valid inferences (Fraenkel & Wallen, 2000). As mentioned before, two pilot studies were conducted at the beginning of this work. In the first pilot study, items were provided with open-ended questions for each section, which are barriers, enablers and benefits part of the survey. The second pilot study was conducted to measure the reliability value of each subsection in a national-wide academic conference. In the second pilot study, almost 300 surveys were distributed to conference participants, but only forty people responded to the survey. Cronbach alpha score for barriers section (N of items 13) were 0.82 incentives section (N of items 16) was 0.88 and benefits section was 0.90 (N of items 17).

3.2.6.1 Reliability scores for actual questionnaire

Cronbach's alpha reliability coefficient (α) of barrier section was .79; for factor 1 (technical barriers) was .62; for factor 2 (intuitional barriers) was .80; for factor 3 (intellectual property right barriers) was .76; and for factor 4 (personal barriers) was .46. Cronbach's alpha reliability coefficient (α) of incentive section was .83; for factor 1 (support mechanism) was .76; for factor 2 (intellectual property mechanisms) was .72; factor 3 (reward mechanisms) was .74 and factor 4 (other mechanisms) was .55. Finally, Cronbach's alpha reliability coefficient (α) of benefit section was .96. As a result, only two factors do not provide accepted reliability level of. 70. The rest of factors and scales have acceptable reliability level, higher than .70. The main reason for low reliability of these two factors is likely that both of them have only two items.

3.2.7 Ethical Consideration

Before administrating the survey, an official permission (Appendix K) was taken from Research Center for Applied Ethics at Middle East Technical University (METU). The policies and procedures of Ethic Committee in METU were utilized. To do this, an application form for human research, informed consent forms and

data collection instruments were submitted to Ethic Committee. All instruments were approved by the Committee. During the administration of the survey, subjects were informed at the beginning of the survey that participation in the study is voluntary and it is possible to withdraw from the study whenever they want. All subjects approved to join the study voluntarily by clicking "I am accepting (Start survey)" button at the beginning of the survey. For the qualitative part of the study, informed consent form was signed by all informants before starting interview.

3.2.8 Data Analysis

In order to analyze gathered data, first of all data cleaning process was performed in order to detect problematic responses and missing values. Then, basic descriptive statistics were administrated by using PAW SPSS 18 statistic software. Following this, factor analysis was performed in order to provide construct validity and determine whether sub section of the instrument has unidimensional or multidimensional structure. Finally, a series of one-way ANOVA test were performed to address some of the research questions.

3.2.8.1 Data Cleaning

For data cleaning, various parameters were taken into consideration. Since data collected through online survey, there were numerous parameters which provide advance data cleaning techniques. For example, each respondent's survey completion time was examined and responses which were completed in a short time were deleted.

In total, there were 3142 responses gathered through two steps data collection. In the first administration, there were 1660 responses and in the second administration, there were 1482 responses. In the data set, data were sorted out by referencing last item (B4S17) in the benefit section of the instrument which is the fourth section before the demographic section of the instrument. In this way subjects who did not fill the first four sections of the instrument were deleted from the data set. Doing this help the researcher to delete most of the problematic items and missing items in the data set. However, there were also some problematic responses in the data set. Following are some problematic responses deleted from data set.

- One response (response 328) which was filled by a student was deleted. This was understood by examining demographic information. He indicated his studentship in the demographic part.

- Two responses completed (response 1732 and 1701) by the researcher for the purpose of control was deleted. This was detected by examining demographic and open-ended question where researcher commented on "delete this item".

- One response (response 1971) which was similar with another response (1972) was deleted. This was detected by looking at IP number, time and demographic information of responses.

- One response (1881) which rated all items in three sections with 1 was deleted.

Data set were also scrutinized in case of outliers, minimum and maximum scores and no problem were detected in terms of these issues. Also 992 of the respondents provided their full name and e-mail address in the demographic part of the survey.

3.3 PART II (Multiple-case Study)

3.3.1 Research Design

As a type of qualitative approach, multiple-case study design was carried out for this phase of the study. As stated by Creswell (2007), case study approach concentrates on "the study of an issue explored through one or more cases within bounded system (i.e., a setting, a context)" (Creswell, 2007, p.73). In this study, there were three bounded OER initiatives or system managed by OER practitioners in the context of three different universities. Since the researcher explored more than one bounded system (three cases) throughout the study, research design was called as multiple-case study approach (Yin, 2002). Different terms (collective case studies, cross-case, multicase or multisite studies) are used when using more than one case in a study (Merriam, 1998). In this study, multiple-case study term was preferred throughout the study.

As echoed by Merriam (1998), "the case study offers a means of investigating complex social units consisting of multiple variables of potential importance in

understanding the phenomenon" (p.41). Yin (2002), on the other side, highlights contextual issues in his definition of case study. He states that "[a] case study… investigates a contemporary phenomenon within its real-life context…" (p.13). That is, case study method can be used when researchers intentionally focus on contextual conditions. In this study, experience of pioneer OER initiatives was investigated in order to understand challenges that they encounter and strategies that they applied through their experiment with OER movement in their context.

In her book about case study application in education, Merriam (1998) sees case study as a useful approach for studying educational innovations, for evaluating programs, and for informing policy. Similarly, Yin indicates that "*the case study is used in many situations to contribute to our knowledge of individual, group, organizational, social political and related phenomena*" (p.1). Since this study investigates recent innovation in education, called as an OER movement, and aims to propose policies about OER for policy makers by focusing on experience of three OER initiatives, using case study approach fits well with the current research study.

In case studies, more than one data collection methods are administrated (Yildirim & Simsek, 2005). In this study, interviews were used as a main data source. In addition, observations were conducted in order to base and support interviews. That is, the researcher observed these initiatives from its web portals, discussion list postings, documents .The researcher also participated OER related activities in Turkey for a long time. He followed OER initiatives' portals. He participated most of the UADMK weekly consortium meetings, OER related activities such as panel sessions in conferences, the consortium's general meetings. Beside this, his supervisor is an executive member of the consortium and he informed the researcher in most of the developments in OER movement.

3.3.2 Informants

Informants were selected from three OER initiatives. The rationale behind for selecting these three initiatives were

- ✓ they were convenient

- ✓ they have at least two years experiences in the OER initiative
- ✓ they have at least 10 courses
- ✓ they have been developed in the concept of OER
- ✓ they are volunteer to participate the study

In each initiative, main responsible people were selected as an informant for the study. Therefore, coordinator and technical person of initiatives were selected as an informant. There were not many people involved in these initiatives. In Baskent University, for example, there was only one person dealing with all the works related with the initiative. Therefore, the researcher has to conduct interview with only one person from this initiative. In Ankara University, there were one coordinator and two technical assistants. In METU, there were one coordinator and one technical assistant.

3.3.3 Data Collection Procedures

Interview was the main data collection method for this part of the study. The researcher conducted face to face semi-structured interviews with six practitioners from three initiatives. Interviews were recorded by using a sound recorder. During the interview, the researcher mainly asked about their experiences on the OER initiative in their universities, what challenges they encountered, what strategies were applied to overcome these challenges, and how the success of these strategies was (Appendix Q). Before conducting interview, interview protocol was developed and it was controlled by the supervisor and the co-supervisor. Then interview protocol was tested with one PhD candidate before conducting actual interviews to ensure clearness of the questions and to gather accurate data via the instrument. Next, appointments were taken from practitioners. Finally, interviews were conducted. Interview questions were almost similar for three initiatives, but the researcher asked different questions during the interview to obtain in-depth information about particular application of initiatives. There were 10 main questions and some questions have 2 or 3 prompts. All participants were voluntary and before starting the interview an informed consent form (Appendix R) were given to be signed by interviewees.

3.3.4 Data Analysis

Data analysis mainly is related with "working with data, organizing them, breaking them into manageable units, synthesizing them, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others" (Bogdan & Biklen, 1998, p.157). In this sense, after interview recordings were transcribed, an initial read through was completed with the transcripts of the interviews and the notes were taken by the researcher. Doing this enabled the researcher to get a general feel for the overall data (Creswell, 2003). After the data were ordered, while reading, a preliminary coding list was developed. Then, the researcher assigned them to the units of data (Bogdan & Biklen, 1998). Since analysis of data is an ongoing process, sometimes these categories were modified, new categories were written and old ones were deleted. Also, it is important to note that the researcher considered conceptual frame and the research questions while analyzing data. So, doing this provided the researcher to focus on what he wants to explore. After developing coding categories (Figure 3.7) and assigning themes, they were listed in alphabetical order. This made easier to memorize coding system. In the final step of the data analysis, interpretation was performed to give meaning to data.


Figure 3.7 Example coding style for interviews

3.3.5 Quality of the Research

It is important to obtain reliable and valid findings in all fields which involve scientific inquiry (LeCompte & Goetz, 1982). Reliability is concerned with the replicability of the scientific findings whereas validity is concerned with the accuracy of scientific findings. Linchon and Guba (1985, cited in Erlandson, Harris, Skipper & Allen, 1993) suggested some strategies to enhance quality of qualitative studies. However, doing this they use different terms instead of reliability and validity. Specifically, they used credibility for internal validity, transferability for external validity, dependability for reliability and confirmability for objectivity (cited in Erlandson et al., 1993).

3.3.5.1 Triangulation

According to Denzin (1970), there are different types of triangulation like multiple sources of data (time, space, person,), methods (observation, interviews, and videotapes), investigators (single or multiple) or theory (cited in Erlandson et al., 1993). In this study, triangulation was provided by conducting interview with more than one person. Also the researcher has been observed these initiatives from its web portals, discussion list postings, documents and participating weekly consortium meetings, general consortium meetings and panel sessions in academic conferences in Turkey. All these activities provide the researcher with an opportunity look at the initiatives from different perspectives.

3.3.5.2 Peer Debriefing

In this process, a person who is outside of the context reviews and asks questions about the study. Throughout present study, the researcher discussed every step of the study with his supervisor and co-supervisor. Also, he discussed some challenging issues concerning the study with his collogues.

3.3.5.3 Member checking

According to Lincoln and Guba (1985, cited in Erlandson et al., 1993), this technique is the most important in providing credibility. Erlandson et al. (1993) suggest different strategies to conduct member checking. For this study, member

checking was applied during interviews by summarizing the data in appropriate place and after the interview by giving interview results to interviewees to add comments on the content.

3.3.5.4 Tick Description

By providing tick description, the probability of transferability to other settings would be easier. These descriptions can be given not only for results, but also every step of the study such as data collection, data analysis etc. In this study, tick description was made use of every phase of the study. That is the researcher tried to provide a clear data collection and analyze process which helps the replication of the study. Besides these, while presenting findings direct quotations was used so that reader can analyze data without adding his/her interpretation into results.

3.3.5.5 Mechanically recorded data

As suggested by Lecompte and Goetz (1982) all data should be recorded mechanically, in order to prevent the validity problem. The researcher recorded all session with a sound recorder device. In this way, he never missed any details in data because he had a chance to listen interviews repeatedly. Also computer-based transcriptions were performed for all interviews.

3.3.6 Limitations of the Study

Every study has a unique characteristics and limitations. This study limits with faculty members who are taught at least one course in higher education level from UADMK member universities. Another limitation of the study is that it could not be possible to collect enough data for providing construct validity of the instrument at pilot testing stage. Therefore, validity of the instrument was provided by using date set gathered from real survey administration. Only three universities are included in the case study and findings / interpretations are limited to these cases. Finally, validity of this study is limited to the reliability of the instruments used, and to the honesty of the participants' responses to those instruments.

CHAPTER IV

RESULTS

"What is junk to one may be gold to another-the digital junk of one person may be the building blocks of knowledge and creative genius for another."

(OECD, 2007)

The results of this study are provided in two parts. While in the first part after presenting demographic information, the survey results are presented with regard to Research Questions 1-3, in the second part results gained from the experiences of three OER initiatives' practitioners are provided considering Research Questions 4 and its sub questions.

4.1 PART 1 (Survey Study)

4.1.1 Demographics

The purpose of giving demographics is to provide a base for analysis conducted. In total, there were 3,146 responses. However after omitting incomplete and problematic responses (see Data Cleaning), this number decreased to 1,637. Faculty members from 57 universities responded to the survey. Figure 4.1 the universities whose response exceeds 20 were shown. Great majority of the faculty members who responded the survey are from state universities (81.1%) and 11.9% of them are from foundation universities (Table 4.1).
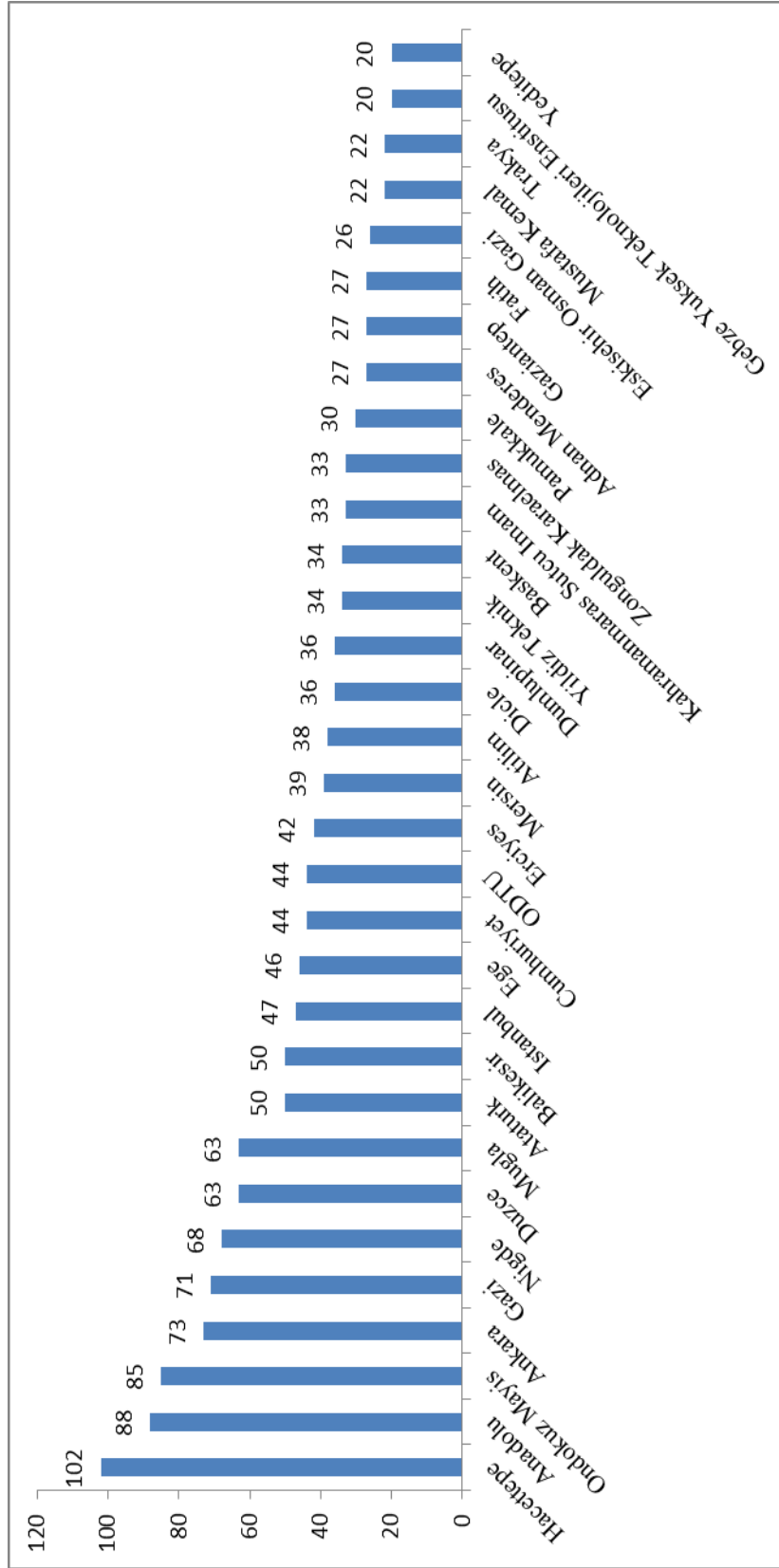
Figure 4.1 Response frequencies across universities

Table 4.1 shows the respondents' gender, academic position, the institute they belong to, academic experiences and university types. Among the 1637 faculty members who responded the demographic part of the survey, 65% of the faculty members are male, 35% of them are female. In relation to title of the faculty members, 31% of them are Assistant Professor, and 21% of them are Instructor, 16% of them are Professor, 13% of them Associate Professor, 11% of them are Research Assistant, 4% of them are Language Instructor, 1.3% of them are Specialist and 2.4% of them are other.

In terms of institute, 43% of the faculty members are from Graduate School of Natural and Applied Sciences; 30.8% are from Graduate School of Social Sciences; 18% are from Graduate School for Health Sciences, 6% are from Graduate School for Educational Sciences, 0.7% are from Graduate School of Informatics and 1.4% are from other institutes. When academic experience of faculty members were examined, it is found that 15% of faculty members have 3 or lower years academic experiences, 32% of them are 4-10 years, 28% 11-17 years, 14% are 18-24 and finally 10% are 25 or higher years academic experiences.

Table 4.1 Demographics of subjects

Gender	f	%
Male	1070	65.4
Female	567	34.6
Total	1637	100
Academic Position		
Professor	265	16.2
Associate Professor	213	13.0
Assistant Professor	512	31.3
Instructor	343	21.0
Language Instructor	67	4.1
Research Assistant	176	10.8

Table 4.1 (cont'd)

Specialist	21	1.3
Other	40	2.4
Total	1637	100
Institute		
Graduate School of Natural and Applied Sciences	711	43.4
Graduate School of Social Sciences	504	30.8
Graduate School for Health Sciences	290	17.7
Graduate School for Educational Sciences	98	6.0
Graduate School of Informatics	12	0.7
The Institute of Informatics	8	0.5
Institute of Ataturk Principles and History of Reforms	4	0.2
The Institute of Marine Sciences	4	0.2
Institute of Applied Mathematics	3	0.2
Turkish Studies Institute	2	0.1
Institute of Population Studies	1	0.1
The Institute of Nuclear Sciences	1	0.1
Total	1637	100
University Types	f	%
State	1442	88.1
Foundation	195	11.9
Total	1637	100
Academic Experiences	f	%
3 or lower	234	14.9
4-10	506	32.2
11-17	448	28.5
18-24	227	14.4
25 or higher	158	10.0
Total	1573	100.0

4.1.2 Background Information

Great majority of (82%) the faculty members stated that they benefited from course materials (syllabus, reading pack, presentation files, quizzes etc.) which are available on the Internet. They also stated that they generally access those resources via search engines (76%). Of those replied, 17.2% of faculty members' all course materials are in digital format, 40.8% the faculty members' great proportion of course materials are in digital format. Also 18% of them have half of their materials are in digital format; 18.3% have small amount digital course materials and finally 5.7% of faculty members have no digital course materials (Table 4.2). It can be seen that most of the faculty members participated in the study have some digital course materials.

Table 4.2 The proportion of faculty members' digital course materials (i.e. .pdf, .doc, .swf etc.)

	f	%
All	281	17.2
A great proportion	668	40.8
About half	295	18
Small amount	299	18.3
Any	94	5.7
Total	1637	100

Of those who responded (1548) the question, which were asking whether, they are publishing their course materials through web or not, 23% of faculty members stated that they are publishing their course materials via web, 61 % of them, do not publishing their course materials via web but they want to publish. However, 16% of faculty members indicated that they do not want to publish their course materials via web (Table 4.3).

Table 4.3 Publishing course materials via web

	f	%
Yes, I do	359	23.2
No, I want	946	61.1
No, but I do not think to publish	243	15.7
Total	1548	100

4.1.3 Research Question 1: Perceived barriers to share course materials

4.1.3.1 Main Barriers

In this part, respondents were asked questions regarding possible barriers for publishing their course materials freely through the Internet and asked about their level of agreement about these barriers. In total, 1637 faculty members responded to this part of the survey and there was no missing data. Overall, the greatest barrier for faculty members is having/expecting problems protecting intellectual property rights of their own materials (M=4.27, SD=1.61). The next five barriers with the highest overall means scores are: 2) B2S9- having/expecting problems providing intellectual property rights of materials that do not belong to them (M=4.19, SD=1.51) 3) B2S5- lack of necessary incentives to share course materials (M=4.07, SD=1.67) 4) B2S13- reluctance of faculty members to share their course materials (M=3.98, SD=1.40) 5) B2S8- increase in plagiarism with freely publishing course materials through the Internet (M=3.74, SD=1.65) 6) B2S6- high course load (M=3.58, SD=1.59). Table 4.4 shows mean and standard deviation of all items in barrier section of the questionnaire in the descending order by mean scores.

Table 4.4 Mean and standard deviation of perceived barriers of sharing course materials

Item No	Items	Mean	SD
B2S2	I have / expect some problems protecting the intellectual property rights to my own materials.	4.27	1.61
B2S9	I have / expect some problems providing the intellectual property rights to materials that do not belong to me.	4.19	1.51
B2S5	There is / will be no required (necessary) incentives	4.07	1.67
B2S13	Faculty members at my university do not / will not have willingness to share course materials.	3.98	1.40
B2S8	Sharing course materials with everyone will increase plagiarism.	3.74	1.65
B2S6	My course load is too heavy.	3.58	1.59
B2S11	I do not think my university has a policy about publishing/sharing course materials.	3.55	1.67
B2S1	I do not have enough time.	3.55	1.56
B2S10	There is / will be no support from my university for publishing course materials.	3.27	1.64
B2S12	There is no necessary technical infrastructure at my University.	2.96	1.68
B2S7	It is risky to share my experiences with everyone in today's environment where competition is high.	2.90	1.66
B2S3	I do not have the technical skills to develop digital materials.	2.45	1.55
B2S4	I do not have the required hardware (computer, scanner, etc.).	2.25	1.51

When we looked percentage of first six barriers, it is seen that at least one third of respondents (30%) were agree, or totally agree for these barriers: 1) B2S2- protecting intellectual property rights of their own materials 54% 2) B2S9- providing intellectual property right of the others' materials 49%, 3) B2S5- no required incentives 48%, 4) B2S13- faculty members' reluctance to share course materials 39%, 5) B2S8- increase in plagiarism when course materials shared with everyone 37%, 6) B2S6- high course load 32%, 7) B2S11- lack of institution policy about OER 33%.

As indicated in the methodology section of the study, possible barriers about publishing course materials freely through the Internet were categorized under four factors (legal, technical, institutional and personal) after conducting exploratory factor analysis (EFA). Following section provides detailed information about each factor emerged after EFA.

4.1.3.2 Legal Barriers

There are four items evaluated under this factor. The results indicate that the most agreed barrier, which is the providing intellectual property rights associated with the material, is placed under this factor. Two items are directly related to the intellectual property rights of the materials. One of them is about protecting intellectual rights of their own materials and the other item is about the providing intellectual property right of the others' materials. As it is shown in the Table 4.5, protecting intellectual rights of their own materials (M=4.27, SD=1.61) is seen as the most agreed barrier among faculty members. The second most agreed item is providing intellectual property right of others' materials (M=4.19, SD=1.51). In addition to these, faculty members were concerned that plagiarism will increase when course materials are shared with everyone (M=3.74, SD=1.65). Final item meaningfully associated with legal factor is that it is risky to share my own experience to everyone in today's environment where competition is high (M=2.90, SD=1.66). However, this item's mean score is the lowest compared to other items in this factor. This may indicate that faculty members are almost neutral about sharing their expertise to everyone in today's environment where competition is high.

Table 4.5 Perceived barriers of the OER movement specific to legal issues

Item No	Items	M	SD
B2S2	I have / expect some problems protecting the intellectual property rights to my own materials.	4.27	1.61
B2S9	I have / expect some problems providing the intellectual property rights to materials that do not belong to me.	4.19	1.51
B2S8	Sharing course materials with everyone will increase plagiarism.	3.74	1.65
B2S7	It is risky to share my experiences with everyone in today's environment where competition is high	2.90	1.66

4.1.3.3 Technical Barriers

There are two items loaded to this factor (Table 4.6). Items that are under the technical barriers factor have the lowest mean scores among all items in the barrier section. Results show that most of faculty members perceive that they have required competencies for developing course materials in digital environment (M=2.45, SD=1.55). Also, most of the faculty members think that they do not have a problem with the accessing required hardware (computer, scanner etc.) (M=2.25, SD=1.51). As a result, it can be claimed that technical barriers appear to be not significant barrier compared with other barriers faculty members face.

Table 4.6 Perceived barriers of the OER movement specific to technical issues

Item No	Items	M	SD
B2S3	I do not have technical skills to develop digital materials.	2.45	1.55
B2S4	I do not have required hardware (computer, scanner etc.)	2.25	1.51

4.1.3.4 Institutional Barriers

There are four items that go under institutional barriers factor. These items are listed in the Table 4.7 in descending order by mean scores. Regarding the technical infrastructure in their universities (*M*=2.96, *SD*=1.68), faculty members are somewhat disagree with the item that there is no necessary technical infrastructure at their university. That is, they somewhat agree that there is necessary infrastructure at their own university. Though this item can be considered in favor of universities, rest of the items evaluated under this factor appears to be negative for universities in the scope of OER movement. Actually, the faculty almost agree that there is/will be no required incentives (*M*=4.07, *SD*=1.67). This item is the third most agreed among faculty members. It can be said that although faculty members are not very sure, there appears to be some agreement that their institutions do not have policies for sharing course materials (*M*=3.55, *SD*=1.67). Faculty members are not very sure, but again they appear to agree that they are/will not be supported by their own institution (*M*=3.27, *SD*=1.64). Lastly, faculty members somewhat agree that their colleagues are reluctant to share their course materials with public (*M*=3.98, *SD*=1.40).

Table 4.7 Perceived barriers of the OER movement specific to institutional issues

Item No	Items	M	SD
B2S5	There is / will be no required incentives	4.07	1.67
B2S13	I thought faculty members at my university don't have / will not have willingness about sharing course materials	3.98	1.40
B2S11	I do not think my university has any policy about publishing/sharing course materials.	3.55	1.67
B2S10	There is/will be no support of my university on publishing course materials	3.27	1.64
B2S12	There is no necessary technical infrastructure at my University	2.96	1.68

4.1.3.5 Personal Barriers

One of the most common barriers mentioned in the literature is the lack of time of faculty members. Results shows that faculty members are somewhat agree that they do not have enough time to make their materials public (M=3.55, SD=1.56). Results also indicated that faculty members think that their course load is high (M=3.58, SD=1.59).

Item No	Items	M	SD
B2S6	My course load is heavy	3.58	1.59
B2S1	I haven't got enough time	3.55	1.56

4.1.3.6 Research Question 1-a

Is there a significant difference between faculty members' perceived barriers for sharing course materials in regard to gender, institute, willingness to publish, course load, academic experience, and university type?

This research question investigated whether demographics (institute, willingness to share, course load, academic experience, and university type) have a significant effect on faculty members' perceived barriers. Results revealed that except for academic experience, all demographic variables have a significant effect on faculty members' perceived barriers.

4.1.3.6.1 The Effect of Institute Types on Perceived Barriers

One-way analysis of variance (ANOVA) was conducted to understand whether there was a significant mean difference among institute types on barriers in general. The ANOVA results indicated that there was a significant difference among institutes in

terms of total barriers, $F_{(4, 1632)} = 5.026$, $p=.001$. Since overall F test was found significant, post hoc comparison was performed to determine which institutes have significant mean difference. In this point, since Levene's Test of Equality of Error Variance was found insignificant indicating equal variances among the groups, therefore Tukey procedure was preferred for post hoc comparison. Given in Table 4.8, post hoc follow up test with Tukey revealed that there is a significant difference between faculty members from social sciences and natural and applied sciences; and faculty members from social sciences and health science on perceived barriers. The faculty members who are from social sciences ($M=3.56$, $SD= .82$) have significantly higher mean scores on perceived barriers than those who are from health sciences ($M=3.31$, $SD= .86$) and natural and applied sciences ($M=3.40$, $SD= .84$). Also the mean scores of Social sciences were significantly higher than the mean scores of Natural and Applied Sciences. Indicating that faculty members from social sciences have high level of agreement on perceived barriers than faculty members from natural and applied sciences and health sciences have.

Table 4.8 Post hoc test results and mean and standard deviation scores for institute

	N	M	SD	1	2	3	4	5
1. Graduate School of Natural and Applied Sciences	711	3.40	.84	--	NS	*	NS	NS
2. Graduate School for Health Sciences	290	3.31	.86		--	**	NS	NS
3. Graduate School of Social Sciences	504	3.56	.82			--	NS	NS
4. Graduate School for Educational Sciences	98	3.50	.79				--	NS
5. Other	34	3.57	.80					--

* The mean difference is significant at the 0.05 level, **0.01 level

NS = non-significant

4.1.3.6.2 The Effect of Willingness to Publish on Perceived Barriers

One-way analysis of variance (ANOVA) was conducted to see whether there was a significant mean difference among willingness to share on perceived barriers in general. The ANOVA results indicated that there was a significant difference among faculty members, F (2, 1545) = 38.993, p=.000. Since overall F test was found significant, post hoc comparison was performed to determine which comparisons have significant mean difference. In this point, since Levene's Test of Equality of Error Variance was found insignificant indicating equal variances among the groups, so Tukey procedure was preferred for post hoc comparison. Given in Table 4.9Table 4.9, post hoc follow up test with Tukey revealed that there is a significant mean difference between the faculty members who are already publishing their course materials on web (*M*=3.21, *SD*= .84) and those who are not publishing but want to publish on the web (*M*=3.43, *SD*= .82) and also those who do not want to publish on the web (*M*=3.82, *SD*= .81). Furthermore, there is also a significant mean difference between the faculty members who are not publishing on the web but want to publish (*M=3.43, SD=82*) and faculty members who do not want to publish their course materials on the web (*M=3.82, SD=79*). It can be concluded that faculty members who do not want to publish their course materials on the web have a higher level of agreement on perceived barriers compared to faculty members who already publish their course materials on the web and those who want to publish.

Table 4.9 Post hoc test results and mean and standard deviation scores for willingness to publish

	N	M	SD	1	2	3
1. Yes, I am publishing	359	3.22	.85	--	**	**
2. No, but I want to publish	946	3.43	.82		--	**
3. No, I do not want to publish	243	3.82	.79			--

* The mean difference is significant at the 0.05 level, **0.01 level

NS = non-significant

4.1.3.6.3 The Effect of Course Load on Perceived Barriers

One-way analysis of variance (ANOVA) was conducted to see whether there was a significant mean difference among three different course load levels on perceived barriers in general. The ANOVA results indicated that there was a significant difference among faculty members, $F (4, 1517) = 13.556$, $p=.000$. Since overall F test was found significant, post hoc comparison was performed to determine which groups have significant mean difference. In this point, since Levene's Test of Equality of Error Variance was found insignificant indicating equal variances among the groups, Tukey procedure was preferred for post hoc comparison. Given in Table 4.10, post hoc follow up test with Tukey revealed that there is a significant mean difference between the faculty members have a low level of course load ($M=3.33$, $SD= .84$) and those who have a medium level of course load ($M=3.55$, $SD= .78$) and also those who have a high level of course load ($M=3.58$, $SD= .84$). It can be concluded that faculty members who have a high and medium course load have a higher level of agreement on perceived barriers than those who have low-level course load.

Table 4.10 Post hoc test results and mean and standard deviation scores for course load

	N	M	SD	1	2	3
1. Low (<17)	855	3.33	.84	--	**	**
2. Medium (17-24)	386	3.55	.78		--	NS
3. High (24<)	281	3.58	.84			--

4.1.3.6.4 The Effect of Academic Experience on Perceived Barriers

One-way analysis of variance (ANOVA) was conducted to see whether there was a significant mean difference among different academic experiences on perceived barriers in general. The ANOVA results indicated that there was no significant difference among difference academic experience levels, $F (4, 1568) = .470$, $p=.76$.

4.1.3.6.5 The Effect of University Types on Perceived Barriers

One-way analysis of variance (ANOVA) was conducted to see whether there was a significant mean difference between faculty members from state universities and those from foundation universities on perceived barriers in general. The ANOVA results indicated that there was a significant difference between faculty members who are from state universities ($M= 3.46$, $SD=.84$) and faculty members who are from foundation universities ($M= 3.30$, $SD=.84$) in terms of total barriers, $F (1, 1635) =5.552$, $p=.019$. It indicates that faculty members from state universities' level of agreements on perceived barriers is higher than faculty members who are from foundation universities' level of agreement on perceived barriers.

4.1.4 Research Question 2: Perceived incentives to share their course materials.

4.1.4.1 Main Incentives

In this part, respondents were asked about possible incentives about publishing their course materials freely through the Internet and asked about their level of agreement about these incentives. In total, 1637 responses are received from faculty members, which mean that there was no missing response in this section as well. The greatest incentive for faculty members is (B3S14) being informed about changes someone made on their materials, which has a mean of 5.27 on a 6-point scale and a standard deviation of 1.18, followed (B3S11) by protecting materials against plagiarism which has a mean of 5.25 and a standard deviation of 1.22. Following are the incentives with the highest overall mean scores: 3) B3S6- providing a usable platform for sharing course materials ($M=5.22$, $SD=0.97$), 4) B3S2- providing hardware for developing course materials ($M=5.17$, $SD=1.14$), 5) B3S4- establishing instructional support centers in universities to support material development ($M=5.13$, $SD=1.11$) 6) B3S16- supporting faculty members by giving reward to

publish their course materials (*M*=5.12, *SD*=1.20). Table 4.11 shows mean and standard deviation of all items in incentive section of the questionnaire in the descending order by mean scores.

Table 4.11 Mean and standard deviation of perceived incentives of the OER
movement

Item No	Items	M	SD
B3S14	I should be informed when someone made changes on my materials.	5.27	1.18
B3S11	Course materials that I shared should be protected from plagiarism.	5.25	1.22
B3S6	A usable platform should be designed for sharing course materials.	5.22	0.97
B3S2	Hardware (computer. scanner. printer etc.) should be provided to faculty members for developing their course materials.	5.18	1.13
B3S4	Instructional technology centers should be established to support materials development.	5.13	1.10
B3S16	A rewarding system should be established to encourage faculty members to publish their course materials.	5.12	1.19
B3S1	Financial support (i.e. copyright fees) should be provided to faculty members for developing course materials.	4.98	1.24
B3S5	Trainings / workshops about materials developments should be arranged for faculty members.	4.91	1.22
B3S3	Materials development effort of faculty members should be rewarded with academic ranking.	4.91	1.43
B3S13	I should be informed about who uses my course materials.	4.65	1.49
B3S7	Faculty members should be supported with the help of student assistants.	4.44	1.46
B3S10	Course materials that I shared are not altered in any way.	4.39	1.67
B3S9	Course materials should be published at one platform in Turkey.	3.70	1.68
B3S8	Sharing course materials should be compulsory.	2.95	1.60

Overall, there were nine incentives which over 70% of respondents said were agree or totally agree. This ratio is very high indicating great majority of faculty members agreed these incentives. These nine incentives are: 1) B3S6- providing usable platform for sharing course materials 84%, 2) B3S14- being informed when someone made changes on their material 83%, 3) B3S11- protecting their course materials from plagiarism 83%, 4) B3S2- providing hardware for developing course materials 81%, 5) B3S4- establishing instructional technology support center for supporting materials development 80%, 6) B3S16- establishing a reward system to encourage faculty members to publish their course materials 79%, 7) rewarding faculty members with academic ranking 74%, 8) providing financial support for developing course materials 73%, 9) arranging trainings and workshops about material development 71%.

As indicated in methodology section of the present study, possible incentives about publishing course materials freely through the Internet were categorized under four factors (supporting mechanisms, intellectual property protection mechanisms, compelling mechanisms and reward mechanisms) after conducting exploratory factor analysis (EFA). Following section provides detailed information about each factor emerged in EFA.

4.1.4.2 Support Mechanisms

There are four items evaluated under this factor. These items are listed in Table 4.12 in descending order by mean scores. Faculty members are agreed that (B3S6) a usable platform should be designed for sharing course materials, which has a high mean score (M=5.22, SD=0.97). They are also agreed with the item (B3S4) which indicates establishing instructional technology office to support material development (M=5.13, SD=1.10). However, though they are not agreed as much as previous two items, they are almost agreed with (B3S5) arranging trainings/workshops about materials development (M=4.91, SD=1.22). Also they somewhat agreed that (B3S7) students assistants can help faculty members (M=4.44, SD=1.46).

Table 4.12 Support mechanisms

Item No	Items	M	SD
B3S6	A usable platform should be designed for sharing course materials.	5.22	0.98
B3S4	Instructional technology centers should be established to support materials development.	5.13	1.11
B3S5	Trainings / workshops about materials developments should be arranged for faculty members.	4.92	1.23
B3S7	Faculty members should be supported with the help of student assistants.	4.45	1.46

4.1.4.3 Intellectual Property Protection Mechanisms

There are four items evaluated under this factor. These items are listed in Table 4.13 in descending order by mean scores. The results indicate that the most agreed incentive, which is (B3S14) the being informed when someone made changes on their materials (M=5.27, SD=1.18), is placed under this factor. The second most agreed incentive, which is (B3S11) protecting course materials that they share from plagiarism (M=5.25, SD=1.22), is also evaluated under this factor. When we look at the other two items, one of them is almost agreed by faculty members about (B3S13) being informed when someone use faculty members' course materials (M=4.65, SD=1.49). Another item, which is (B3S10) about preserving course materials in the first form of faculty member shared, is also almost agreed by faculty members (M=4.39, SD=1.67)

Table 4.13 Intellectual property protection mechanisms

Item No	Items	M	SD
B3S14	I should be informed when someone made changes on my materials.	5.27	1.18
B3S11	Course materials that I shared should be protected from plagiarism.	5.25	1.22
B3S13	I should be informed about who uses my course materials.	4.65	1.49
B3S10	Course materials that I shared are not altered in any way.	4.39	1.67

4.1.4.4 Reward Mechanisms

There are three items evaluated under this factor. These items are listed in Table 4.14 in descending order by mean scores. Faculty members agree that (B3S16) a rewarding system should be established to encourage faculty members to publish their course materials, which has a mean of 5.12 and a standard deviation of 1.19. As for financial support (B3S1) and academic promotion (B3S3), majority of (73 %) faculty members selected either agreed or totally agreed for both items. However, mean score of financial support item (M=4.98, SD=1.24) is slightly higher than mean score of academic promotion (M=4.91, SD=1.43) (Table 4.14).

Table 4.14 Reward mechanisms

Item No	Items	M	SD
B3S16	A rewarding system should be established to encourage faculty members to publish their course materials.	5.12	1.19
B3S1	Financial support (i.e. copyright fees) should be provided to faculty members for developing course materials.	4.98	1.24
B3S3	Materials development effort of faculty members should be rewarded with academic ranking.	4.91	1.43

4.1.4.5 Compelling Mechanisms

There are two items loaded to this factor can be seen in Table 4.15. Items that go under the compelling mechanisms factor have the lowest mean scores among all items in the incentive section of the questionnaire. Faculty members are not sure whether course materials should be published at one platform in Turkey or not with a mean of 3.70 and standard deviation of 1.68, but they are somewhat disagree that sharing course material should be compulsory, which has a mean of 2.95 and a standard deviation of 1.60.

Table 4.15 Compelling mechanisms

Item No	Items	M	SD
B3S9	Course materials should be published at one platform in Turkey.	3.70	1.68
B3S8	Sharing course materials should be compulsory.	2.95	1.60

4.1.4.6 Research Question 2-a

Is there a significant difference between faculty members' perceived incentives for sharing course materials in regard to institute, willingness to publish, course load, academic experience, and university type?

This research question investigated whether demographics (institute, willingness to publish, course load, academic experience, and university type) have a significant effect on faculty members' perceived incentives. Results revealed that except for academic experience and institute types, other variables have a significant effect on faculty members' perceived incentives.

4.1.4.6.1 The Effect of Institute Types on Perceived Incentives

One-way analysis of variance (ANOVA) was conducted to see whether there was a significant mean difference among institute types on incentives in general. The ANOVA results indicated that there was no significant difference among institutes in terms of total incentives, $F (4, 1632) = 2.076$, $p=.082$.

4.1.4.6.2 The Effect of Willingness to Publish on Perceived Incentives

One-way analysis of variance (ANOVA) was conducted to see whether there was a significant mean difference among willingness to share on perceived incentives in general. The ANOVA results indicated that there was a significant difference among faculty members, $F (2, 1545) = 11.191$, $p=.000$. Since overall F test was found significant, post hoc comparison was performed to determine which comparisons have significant mean difference. In this point, since Levene's Test of Equality of Error Variance was found insignificant indicating equal variances among the groups, so Tukey procedure was preferred for post hoc comparison. Given in Table 4.16, post hoc follow up test with Tukey revealed that there is a significant mean difference between the faculty members who are not publishing on the web but want to publish (*M*=4.79, *SD*=.69) and those who are already publishing their course materials on the web (*M*=4.61, *SD*= .73) and also those who do not want to publish on the web (*M*=4.62, *SD*=.66).

Table 4.16 Post hoc test results and mean and standard deviation scores for willingness to publish

	N	M	SD	1	2	3
1. Yes, I am publishing	359	4.61	.69	--	**	NS
2. No, but I want to publish	946	4.78	.73		--	**
3. No, I do not want to publish	243	4.62	.66			--

* The mean difference is significant at the 0.05 level, **0.01 level

NS = non-significant

4.1.4.6.3 The Effect of Course Load on Perceived Incentives

One-way analysis of variance (ANOVA) was conducted to see whether there was a significant mean difference among three different course load levels on perceived incentives in general. The ANOVA results indicated that there was a significant difference among faculty members, $F(2, 1519) = 3.263$, $p=.039$. Since overall F test was found significant, post hoc comparison was performed to determine which groups have significant mean difference. In this point, since Levene's Test of Equality of Error Variance was found insignificant indicating equal variances among the groups, Tukey procedure was preferred for post hoc comparison. Post hoc follow up test with Tukey revealed that there is a significant mean difference between the faculty members have a low level of course load ($M=4.68$, $SD= .68$) and those who have a high level of course load ($M=4.80$, $SD= .70$).

4.1.4.6.4 The Effect of Academic Experience on Perceived Incentives

One-way analysis of variance (ANOVA) was conducted to see whether there was a significant mean difference among different academic experience on perceived incentives in general. The ANOVA results indicated that there was no significant difference among difference academic experience levels, $F(4, 1568) = .729$, $p=.572$.

4.1.4.6.5 The Effect of University Types on Perceived Incentives

One-way analysis of variance (ANOVA) was conducted to see whether there was a significant mean difference between faculty members who are from state universities and those from foundation universities on perceived incentives in general. The ANOVA results indicated that there was a significant difference between faculty members who are from state universities ($M= 4.74$, $SD=.70$) and faculty members who are from foundation universities ($M= 4.58$, $SD=.66$) in terms of total incentives, $F(1, 1635) =8.403$, $p=.004$. It indicates that faculty members from state universities' level of agreements on perceived incentives is higher than faculty members who are from foundation universities' level of agreement on perceived incentives.

4.1.5 Research Question 3: Perceived values of sharing course materials

4.1.5.1 Possible Benefits

Means and standard deviations of perceived possible benefits of sharing course materials are provided in Table 4.17. As indicated in the table, academics have a strong consensus for possible benefits of OER movement. In total, 1637 faculty members responded this part of the survey. All mean scores are higher than 4.75 showing that academics have a very strong consensus for possible benefits of freely publishing course materials. As shown in the Table 4.17, the most agreed benefits of the OER among participants is (B3S12) the opportunity of getting benefited from experienced faculty members' experiences (M=5.30, SD=.93). Scaffolding (B3S6) inexperienced faculty members to design their courses (M=5.29, SD=.87) and (B3S17) increase in amount of Turkish resources on Internet (M=5.29, SD=1.02) are the most agreed benefits of the OER among participants sharing the same mean score. The other leading benefits agreed on by faculty members are; (B3S5) making contribution to universities where educational resources are scarce (M=5.26, SD=.96), (B3S15) providing to see different aspect for any courses (M=5.23, SD=.92), helping faculty members to archive their course materials (M=5.21, SD=.97), and supporting life-long learning (M=5.21, SD=.97).

Considering the percentages, again the strong consensus is seen from the results. Apart from the item with the lowest mean score which has a 64% agreement, all other items which over 72% of respondents said were agree, or totally agree. To view the benefit frequency and percentage tables for each item, see Appendix V.

Table 4.17 Mean and standard deviation of benefits of the OER movement

Item No	Items	M	SD
B3S12	It is/will be possible to be benefited from experienced faculty members.	5.30	.93
B3S6	It scaffolds inexperienced faculty members to design their courses.	5.29	.87
B3S17	It increases amount of Turkish resources on Internet	5.29	1.01
B3S5	It makes contribution to universities where educational resources are scarce	5.26	.96
B3S15	It provides to see different aspect for any courses.	5.23	.92
B3S2	It supports life-long learning.	5.21	.97
B3S16	It helps faculty members to archive their courses.	5.21	.97
B3S13	Quality of course's resources will increase since more people will have a chance to examine the courses.	5.16	1.05
B3S3	It helps university students to decide which courses to sign up for.	5.13	.99
B3S9	More reliable resources will be on Internet since universities provide.	5.13	1.08
B3S10	It provides transparency.	5.13	1.06
B3S8	It compels/encourages faculty members to design their courses with the greatest of care.	5.10	1.05
B3S1	It contributes to advertisement of my university in national and international arena.	5.05	1.12
B3S7	It enhances quality of education in universities.	4.98	1.13
B3S11	It provides an environment where courses can be controlled.	4.96	1.23
B3S14	It enhances communication among faculty members.	4.90	1.16

Table 4.17 (cont'd)

B3S4	It guides prospective university students about determining the department they want to study.	4.75	1.26

4.2 PART 2 (Multiple-case Study)

In this part of the study, the last research question was answered by focusing on experiences of three OER initiatives' practitioners. The main research question and sub-research questions for this part are:

4.2.1 Research Question 4: Experiences of three national initiatives

What do OER practitioners in three national initiatives experience during the implementation of OER project in their own institution?

a. What were the challenges that have been confronted by practitioners during implementation of OER projects in three national initiatives?
   i. What were the main reasons behind for these challenges?

b. What were the strategies that have been applied during the implementation of OER projects in three national initiatives?

4.2.2 Case 1: Ankara University OpenCourseWare Initiative (ANKADEM)

4.2.2.1 Background information about the institution

Ankara University is one of the leading public universities in the capital of Turkey, Ankara. Its 12 graduate schools and research groups are its backbone. It also offers associate (two-year) degree programs and undergraduate programs via 14 faculties, three vocational schools, seven colleges, and a state conservatory. It offers 32 associate degree and 105 undergraduate programs. The university had 3,820 associate degree and 33,839 undergraduate level students in 2010. A total of 1,765 faculty members are employed at the university: 1,143 professors, 323 associate professors, and 299 assistant professors. In addition, its 1,625 auxiliary academic staff is composed of 120 faculty members, 282 lecturers, 178 specialists, and 1,045 research assistants (Ankara University, 2011).

4.2.2.2 OCW Activities

Ankara University started its OCW (ANKADEM) work after the initial meeting in March 2007 arranged by TÜBA. Ankara University is also a member of the International OpenCourseWare Consortium.

4.2.2.2.1 Course Structure

As of May 2011, there are 26 courses from 10 different departments represented in their portal. However, if a course consists of 14 weeks (according to the Turkish Higher Education System), one third of the courses at ANKADEM are not complete. They only include a syllabus of the course and the first two or three weeks of materials. Almost all materials are in .pdf format, most of the syllabi and curriculum are .html, and one course includes .pps files. Therefore, this makes the reusability of the materials difficult. The Ankara University OER portal was based on eduCommons, which is a Course Management System (CMS) specifically developed for OCW projects at Utah State University. However, this CMS is not used anymore. Instead of this, Moodle has been started to use as a course management system.

4.2.2.2.2 Course Submission Procedure

At first, volunteer faculty members sent their course materials through e-mail and technical staff uploaded those materials to the system. Currently, volunteer faculty members can submit their materials to the system by applying through e-mail by filing the course application form. Faculty members create an account by providing an e-mail address associated with Ankara University (@ankara.edu.tr). Course materials can then be uploaded to a temporary section visible only to the faculty member and system administrator. Finally, the course is transferred to the related department section by the system administrator.

4.2.2.2.3 OCW Staff

There is no dedicated moderator for the OCW portal, so at the beginning three people allocated their time and effort: one project manager from the Library and Documentation Center and two research assistants from Ankara University's

Distance Education Centre (ANKUZEM). However, project manager indicated that after September 2010, a new part time student assistant was hired for this project and he has managed OCW portal in place of two research assistants. He is able to get help from those assistants when needed. Currently, the only responsible unit for the OCW project at Ankara University is the Library and Documentation Center.
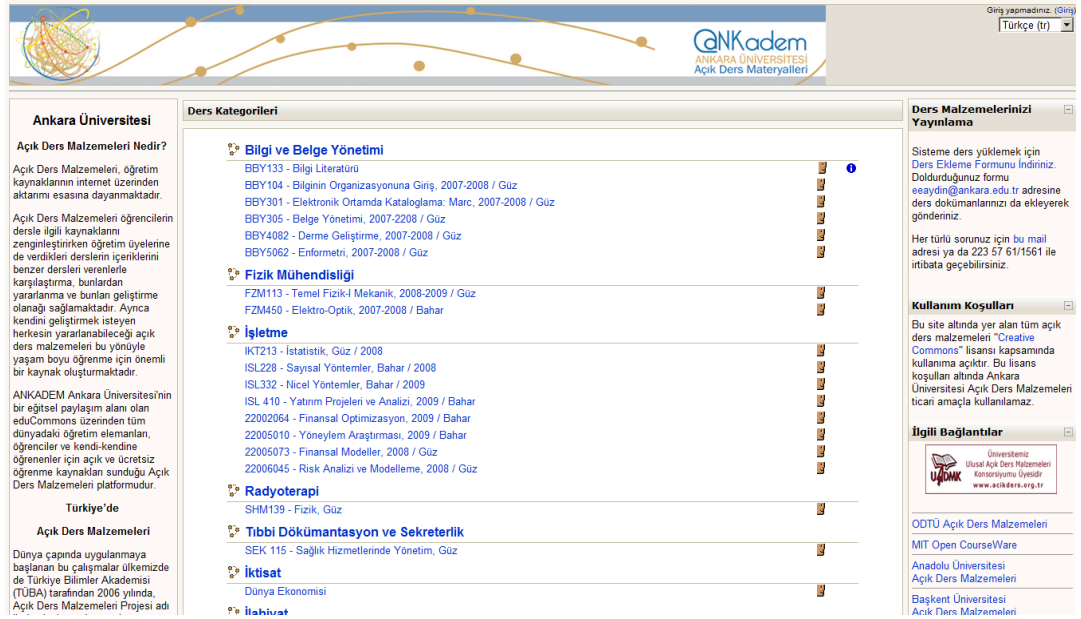
Figure 4.2 A Screenshot from Ankara University OCW portal

4.2.2.2.4 Challenges Encountered

A number of challenges were stated during the interviews with the practitioners. Challenges encountered in this initiative can be categorized into three themes. The first category is lack of interest of faculty members, the second theme is lack of a dedicated unit and human resources and third theme is related using unfamiliar technological tools.

4.2.2.2.5 Lack of Interest of Faculty Members

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Reluctance of faculty members to share their course materials is seen as the most cited challenge during the interviews. Practitioners indicated that it is difficult to find volunteer faculty members for sharing their course materials. One of the participants reports this issue as:

> *Ama genelde hocalarda hem açık ders malzemlerinde hem de açık arşivimizde bir sorunumuz var sorunda değil aslında bir uzaklaşma bir soğukluk kopukluk var.... Açık ders malzemelerinde bu daha da kapalı. kendiliğinden ders veren hoca sayısı 3-5.*

> *But in general we have a problem both OpenCourseWare and open archive. Actually it is not a problem, there is a distance, standoff, disconnection… In OpenCourseWare this is worse. The number of faculty members who gives courses themselves (voluntarily) is only 3-5.*

There were many reasons reported during the interview related with this unwillingness of the faculty members to OCW project. While some of them were reported or implied directly by faculty members to practitioners, others were assumed by practitioners that faculty members might have.

One reason highlighted is that faculty members are not self-confident with the quality of their course materials. One of the participants touched upon this issue by saying:

> *Hocalar ders notlarının güncelliğine içeriğine ilişkin tereddüt yaşıyor olabilirler. Herkese açtıkları zaman ve herkes tarafından görüleceği zaman ders notlarıyla ilgili bilgiler alenileşince orda kendilerinin çekinceleri olabilir.*

> *Faculty members might have hesitation about updateness of their course materials. When they open* [their course materials] *everybody and everybody can see* [course materials], *information about course materials become public in there they have some hesitation.*

A quote from another practitioner reinforced this issue by focusing on insufficiently polished materials of faculty members:

Ayrıca şöyle bir şey oldu benim ders notlarım var ama öğrenciye ben sınıfta dağıtıyorum webe koyunca çok daha düzeltmem gerek üzerinde uğraşmam gerek....Makyajlamam gerek bunu direkt webe atamam o şekilde sürecte gelmeyebiliyor içerikler.

Also, such thing happened. I have course materials, but I distribute to my students in class. When I put on the web, I need to make correction, have to spent effort... I need to make-up, I cannot put directly to web. So contents could not be provided in the process [all because of these reasons].

Other mentioned reasons that can be led to unwillingness of faculty members to share their course materials are lack of time, lack of interest, lack of efforts, intellectual property issues, and lack of technical skills. In addition to these reasons which were directly reported or implied by faculty members to the practitioners, two possible reasons were also claimed during interviews.

One of the assumed reasons argued by practitioners is that faculty members might concern about being criticized by their colleagues. An extract from a practitioner illustrate this point:

Belki diyorum başka çekinceleri olabilir. Aynı dalda başka uzmanla onun ders anlatması arasında farklılıklar vardır. O uzmandan gelecek feedbacklerinde belki kendisi için olumsuz olacağını düşünüpte oraya koymak istemeyebilir

Perhaps they have some other hesitations. There might be some difference between the one and other experts in the same field about lecturing. He might be fear about negative feedbacks likely to be provided by the other expert. Therefore, he might be reluctant to [publish their course materials]

Another argument was made is publishing course materials can devalue faculty members course materials since sometimes it was not possible to explain some issues in materials which are detached from actual classroom settings.

powerpointte bir sembol koyuyordur orda açıklıyordur ama böyle webe koysa bir anlam ifade etmeyecektir hani.Webe koyduklarıyla öğrenciye

verdiği bir olamaz zaten farklı olmak zorundadır. hocaların böyle çekinceleri
var belki

He might put a symbol to powerpoint and explain this symbol in there [class],
but if he put like this on the web, it will be nonsense. [Content] *published on*
the web and given to students cannot be same, it has to different. Perhaps,
faculty members have this kind of hesitation

As can be seen, there are various reasons that cause faculty members to remain aloof
from this movement.

4.2.2.2.6 Lack of Dedicated Unit and Technical Staff for OCW Project

In this initiative, OCW project is led by Library and Documentation Center.
However, this center is not dedicated to this project and there is lack of technical
staff who can involve within this department. Instead of this, at the beginning of the
project (about two years) two technical staff from distance education center of the
institution (ANKUZEM) supported this project. These people were not allocated for
only this project, but they were involving with this project besides their works in
ANKUZEM. Therefore, they could not involve with the project apart from basic
tasks that needs to be done such as establishing OCW platform and uploading course
materials to the system. Coordinator of the OCW initiative reported this issue as:

Bizde çalışan kütüphaneci arkadaşların bilgisayarla ilişkilerinde, bilgisayar
desteği konusunda sıkıntılarımız vardı başlangıç sırasında. O dönemdeki
uzaktan eğitimdeki müdür arkadaşla eğitim birimleriyle ilgilenen bir
arkadaştı ondan rica ettim bize eleman desteği verirmisin diye sadece
eleman desteği eduCommons kurulması bizim sağladığımız içeriğin
educommons aktarılması konusunda destek aldık ama şu an bir kütüphaneci
arkadaşımız başladı yeni göreve bilgisayar altyapısıda iyi artık.

At the beginning, we have some problems about computer skills of colleagues
working in Library and Documentation department. In that time I requested
manager of distance education who is also dealing with education unit about
giving human support. And we took support about establihing eduCommons,
uploading content we provided to the eduCommons, but now a new colleague

from Library and Documentation department startted to work. He is also goot at about using computer.

The coordinator, on the other hand, indicated that a new part time student was hired in the scope of this project and he has strong technical skills. Thus, it seems that lack of dedicated unit and technical staff is one of the challenges that Ankara university initiative was encountered in the first two years of the project. This challenge might also negatively affect the sustainability of the project. The manager of the project objectively explained the situation in the following comments he made during the interview:

> *projeye şimdi başlıyor olsaydım ben kütüphane dökümantasyon dışında bir ekibin bir kurumun kuruluşun ya da birimin bu işi üstlenmesini isterdim. Çünkü ben bu işte gayretimle bir yere geldi ben burda nihayetinde işi götürüyorum asıl kadrom burada değil 1-2 yıl sonra fakülteme döndüğüm zaman bu işle uğraşacak kimse olmayacak. Bireysellikten çıkartılması gerekir onunda tek yolu bilimsel destek ofisinin veya öğretim teknolojileri destek ofisinin kurulmasıydı ama ofis kurulmadığı halde bu işte deneyimi olan uzaktan eğitim merkezindeki arkadaşlarla çalıştık ama çok başarılı olamadık.*

> *If I have started to this project now, I would have prefered an institution, a department or a unit other than Library and Documentation who took the responsibility of this project. Because with my effort this project reached to this point, eventually my position is not here, 1-2 years later when I return to my faculty, there would be anybody who is involving with this project.This project should not be depend on individuals, the only way to do this was to establish scientific support office or instructional support office but even we establish this office and we receive support from distance education center, but we could not be so successful.*

In short, lack of dedicated unit for OCW project in Ankara University cause different problems and even it could affect sustainability of the project in the long term.

4.2.2.2.7 Using Unfamiliar Technological Tools

Using unfamiliar course management system for the OCW portal caused some problems for technical staff of the project. At the beginning of the project, eduCommon, course management system specifically developed for OCW projects, was used. However, this platform is based on python programming language and SQL database that technical staff was not familiar. One of the technical staff reported this issue as:

> *eduCommons sistem tabi biraz zor oldu bizim için windows değilde lunix üzerinden çalışması açık kaynak kodlu yazılımlar üzerinden devam edilmesi bir gereklilik olduğu için bunun üzerinden devam ettik ama o süreçtede baya zorluk çektik Türkiye de fazla kullanılmayan dil üzerinde çalışıp aynı zamanda o dilin kullanıldığı database üzerinden çalışmak zor oluyordu alt yapı olarak*

> *eduCommons of course was difficult for us. Not windows but Linux, since working on open source software is necessary we continue to work on this system but we face difficulties in this process. Working on a [programming] language and database in which this language is running was difficult as an infrastructure*

Therefore, it was suggested that selecting suitable technical solution in line with the technical staff skills and technical infrastructure of the institution is important at the beginning of the OCW projects.

4.2.2.3 Strategies Applied

Many strategies were applied or desired to accelerate efforts to promote the OCW project in Ankara University. There were two main strategies and some sub-strategies. In addition to these strategies, practitioners indicated desired strategies that can be implemented in the future. These two main strategies are providing academic points to whom s/he provided courses to Ankara OCW initiative and faculty recruitment through personal relationships.

4.2.2.3.1 Providing Academic Points

Ankara is, notably, the first university to provide academic reward points to faculty members who publish their course materials as an OER. This strategy stated by manager of the Ankara OCW as:

> *Üniversite yönetim kurulu ile de konuştuk Ankara Ünversitesi atama yükseltme kriterlerinden Açık Ders Malzemelerine bir ders koymayı bir faaliyet olarak eklettik. Bu karar YÖK ten de gecti*

> *We talked also with the University Administrative Committee and opening a course in OpenCourseWare platform was included as an academic activity. This decision was also approved by Higher Education Council (YÖK).*

Although some faculty members in need of academic points have published their courses, the initiative has not lead to a drastic increase on the number of the courses with this strategy. This can be understood from following excerpt taken from dialogue between interviewee and interviewer:

> Interviewer: *bu ilanı yaptıktan sonraki talep ne kadar oldu tahmini?*

> Interviewee: *çok çok fazla olmadı. belki bilmiyorum hocalarımızın böyle bir şey ihtiyacı mı yoktu yayınları mı vardı. O kısmı bilemiyecem ama 4-5 hocadan çok ısrarla talepler geldi hatta arkasından dosyama ekliyecemde biran önce koyarmısınız diye bir de rica geldi*

> Interviewer: *After this announcement about how many applications you received.*

> Interviewee: *Not so much. I don't know faculty members are not need to this or they have enough publication. However, there were insistive request from 4-5 faculty members. Even they requested that I will add to my files* [academic promotion application file] *so could you submit my courses as soon as possible* [into OpenCourseWare portal]

In this point, it is important to clarify details of this strategy. This academic activity provides academic points to faculty members, but it is not a prerequisite for academic position. Like other activities such as writing a report for national or international institutions, developing OCW materials to be published in Ankara

OCW portal is one of the optional academic activities among 33 activities. In academic promotion criteria document, this activity stated as *"Üniversitemiz web sayfasında (ANKADEM) kullanıma açılan ders materyali ya da uzaktan eğitim materyali geliştirmiş olması"* [*Course materials or distance education materials should be developed to be published in our university web page* (OCW Portal-ANKADEM)] (Academic Promotion Criteria, 2011, p.14). Details of this strategy stated by manger of the initiative as:

> *...ilk olarak atama yükseltme şeylerine konuldu ama olmazsa olmaz bir zorunlu ilke değil.örneğin Ankara üniversitesinin 5 tane zorunlu ilkesi var kitap yazmak, citation indexte yer almak falan gibi onun dışında bilimsel faaliyetleride şey yapıyor 15 faaliyetten 7 ni yerine getirmesi gerekiyor atama yükseltme için o 15 faaliyetten biride açık ders malzemelerine ders koymak*

> *...at first, it was added to faculty promotion things [creteria] but it was not an essential criteria* [for academic promotion]. *For example, there are five compulsory criteria of Ankara University; writing a book, being placed in citation indexes stuff like that and they cover other scientific activities. [Faculty members] have to perform 7 out of 15 activities for faculty promotion, and one of the activity is to place a course to the open course materials into* [OpenCourseWare portal].

Thus, although this strategy did not lead to a drastic increase in the number of courses published through OCW portal, it is important to see sharing course materials as an academic activity in the academic promotion criteria of universities.

4.2.2.3.2 Personal Relationship

According to the manager of the project, most of the courses in Ankara OCW have been the result of personal communication with faculty members. He stated this issue in following comment:

> *Onun dışında benim kendi ikili ilişkilerim veya kişisel ilişkilerimin olduğu Dil Tarih Coğrafya fakültesi hem de diğer fakülteler deki arkadaşlarımdan destek istiyorum*

Apart from this, I am asking support from my friends who are at Faculty of Language, History and Geography and those at different faculties and who I have personal or bilateral relationship.

Hence, the personal relationship is one of the best strategies in recruiting faculty members. Most of the courses are from the department, with which the manager is affiliated or faculties where manager of the OCW project has strong relationship.

4.2.2.4 Sub-Strategies

Announcement via academic discussion list and university home page, sending official letter on behalf of university rector to faculties, arranging informative meetings with administrators of faculties and faculty members were applied strategies throughout the implementation of the Ankara OCW project.

4.2.2.4.1 Desired Strategies

They also stated some desired strategies that could be implemented if the necessary conditions were satisfied. These strategies were establishing a dedicated unit for the OCW project and providing technical support to faculty members via this unit, getting support from public authorities, establishing standard for course submission, providing automatic licensing module built-in the OCW portal, creating promotional videos and selecting technological tools in line with the university infrastructure and technical staff skills. Apart from these strategies, manager of the project indicated a new strategy which is a mixed of different strategies indicated above and based on one of the best working strategy, personal communication.

Manager of the project suggested that creating a collective intelligence group from each faculty could be a first step. Members of this group should be selected among volunteer faculty members who keen to publish their course materials and has technological skills. In this way, each faculty has at least one faculty member representative. Then a dedicated office could be established and office staff can communicate with these representatives to organize the OCW activities in their faculty.

belki şu olabilir her fakülteden her fakültedeki ilgili şeylerden bir komisyon bir ortak akıl kurumu oluşturulup hocaları işin içine bizzat katmak. Bir ofis kurarsanız o ofis bu işi yapar hocaları tek tek dolaşabilir ya da işin başlangıcında bu işe ilgisi olan yakınlığı olan az çok teknolojik alt yapısı olan kişilerden şey kurup işte her fakülteden bir temsilci kurup o fakülteyi o toparlasın temsil etsin dersleri alsın şeklinde arasın ilgilensin bilgilendirsin

It might be something like this; we can found a consultation commission foundation with the [people] who are related [technological stuff] and incorporating faculty staff to this. If you found an office, it will do this job and they might deal with each faculty staff one by one, or at the beginning of this work, we can found something with the people who interest in [technology] or at least have a familiarity with technology, I mean taking a responsible from each faculty and they might represent the faculty, arrange the courses, take care of this job and inform others.

As can be understood from the quotations below, most of time faculty members forget the promises which s/he gave about publishing their course materials as OER. Manager of the project indicated that there are a number of faculty members who promise to publish their courses in OCW portal, but then they forget. He suggested making continuous reminder to those faculty members. He explained this strategy in his comments as:

[Hocaların] *broşür ellerine gidiyor bakıyor bir kenara koyuyorlar ondan sonra bir daha dönmüyorlar sürekli kapısına gideceksin 1-2 kere gidip görüşeceksin veriririm diyo ama sonra unutuyor. hocam broşürü okuyor hıım iyiymiş buna destek sağlayalım diyor sonra kenarda kalıyor unutuyor ama öyle bir ekip olursa senle konuştu bir ders hazırlayım dedi 1 hafta sonra kapısına bir daha gidecek 1 ay sonra tekrar gideceksin hocam ne oldu hani verecektin hani söz vermiştin falan...işte hadi ders notlarını düzenleyelim sisteme yüklemeyi gösterelim...*

The brochures are delivered to [faculty members], they have a look and the put it away, then they never look it at again. [You] have to go to them contstantly, meet 1-2 times, [they] say they will give, but then they forget it.

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They read the brochure and say "hmm this is good, lets support it" but then it remains aside, but if there is a team to talk to [faculty], ask a preparation of a course, after a week visit them, and after one month visit them again to ask "what happened, why have you not given the [course], you had promised it" like this... Like "lets organize the course materials, lets show how you upload to the system"...

Hence, this strategy assumed that a number of faculty members could share their course materials in OCW portals. However, they need some kind of external encouragement and continuous communication with them is important.

4.2.3 Middle East Technical University OpenCourseWare Initiative (METU OCW)

4.2.3.1 Background Information about the institution

Founded in 1956, Middle East Technical University is one of the most competitive public universities in Turkey. Over one-third of the 1000 students with the highest scores on the National University Entrance Examination attend METU. As of 2011, METU has 750 faculty (professors, associates professors, etc.), 400 academic instructors, and 1,400 research assistants. It provides education to over 23,000 students and hosts more than 1,500 international students from 80 countries. The language of instruction at METU is English. METU offers 40 undergraduate programs at 5 faculties and has 5 Graduate Schools with 97 masters and 62 doctorate programs (METU, 2011).

4.2.3.2 OCW Activities

METU's website states:

The mission of the Middle East Technical University is to reach, produce, apply and promote knowledge, and to educate individuals with that knowledge for the social, cultural, economic, scientific and technological development of our society and humanity. This is to be done by bringing teaching, research and social services up to universal standards. (METU, 2011)

OCW is one important way to realize this mission. The METU OCW initiative officially began on 16 April 2008. Currently, it is the largest OER initiative in Turkey, with 83 courses from 19 departments published by 35 faculty members. METU OCW is also a member of the International OpenCourseWare Consortium. Since it is the language of instruction, most of the course materials are in English, but there are Turkish courses as well. Besides course materials, there are extra materials on the site such as videos from METU faculty members or videos of seminars conducted at METU. The site (see Figure 4.3) is managed by the Instructional Technology Support Office (ITS) at METU. This office was established in 2005 by the president of the university. The office has three research assistants under two academic staff with responsibilities including supporting the facilities of e-learning, organizing seminars, and overseeing the OCW project (Gurbuz, Ari, Ozturk, Kubus, & Cagiltay, 2008). The office provides three primary services:

- helping faculty members transfer their materials from hard-copy to digital format,
- promoting OCW to faculty members, and
- Organizing the portal (keeping statistical information of site visits, uploading materials, updating courses, etc.).
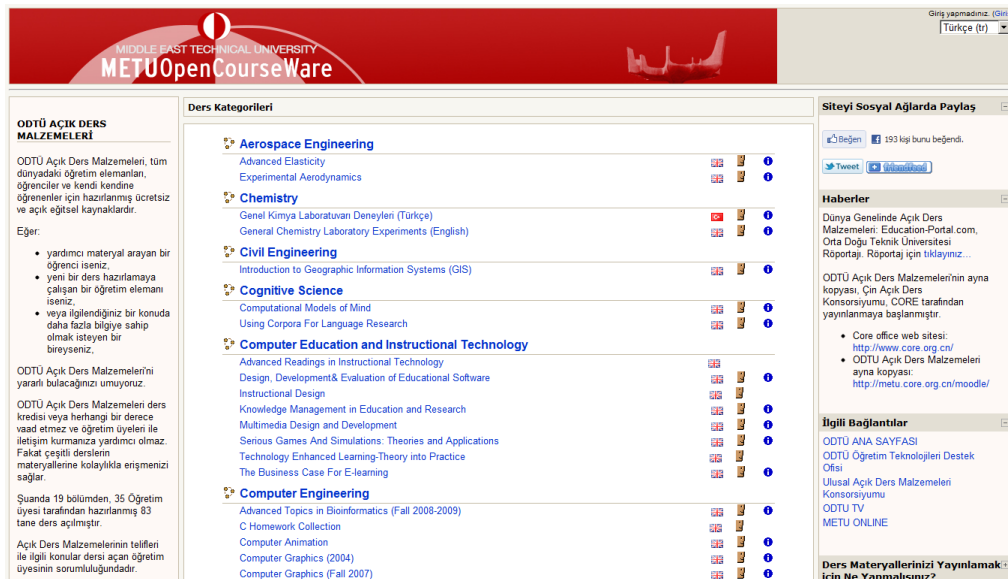

Figure 4.3 A screenshot from METU OCW portal

4.2.3.2.1 Portal Structure

In the METU OCW, courses are categorized under the department name where courses are provided (Figure 4.3). In order to access course materials, related course link should be clicked. Then course materials can be seen. In general, each course includes following structure: Name of the course, instructor's name, picture and course published date Course syllabus, weekly structure and related materials for each week (Figure 4.4) Most of the course materials are in pdf format. Therefore, this makes reusability of the materials difficult.

Figure 4.4 General course structure of the METU OCW

4.2.3.3 Awards for OpenCourseWare Excellence (ACE)

Chemistry lab course, taught by Chemistry department and prepared by METU Instructional Technology Support Office, nominated with two awards. The first one is the Awards for OpenCourseWare Excellence (ACE) on May 5, 2011 in the video and multimedia category given by OCW Consortium.
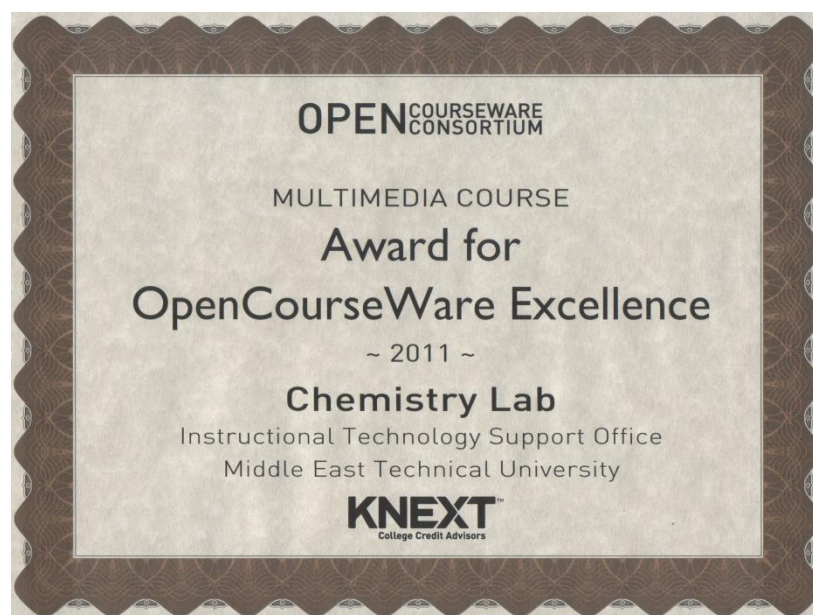
Figure 4.5 The OCW Consortium Award for METU OCW

The second one is OCW People's Choice Award Winner on August 17, 2011 in the category of best video lectures given by Education-Portal.com (Figure 4.6).

Figure 4.6 OCW People's Choice Award for METU OCW

4.2.3.4 Statistics of METU OCW

As seen from the Figure 4.7 , there are a number of users accessing METU OCW around the world. Figure 4.8 shows visit statistics from 5 November 2010 to 6 May 2011. In total, there were 42,968 visits to the site in this six-month period, with about 32,000 total visits originating for Turkey.

Figure 4.7 METU OCW site visits by country
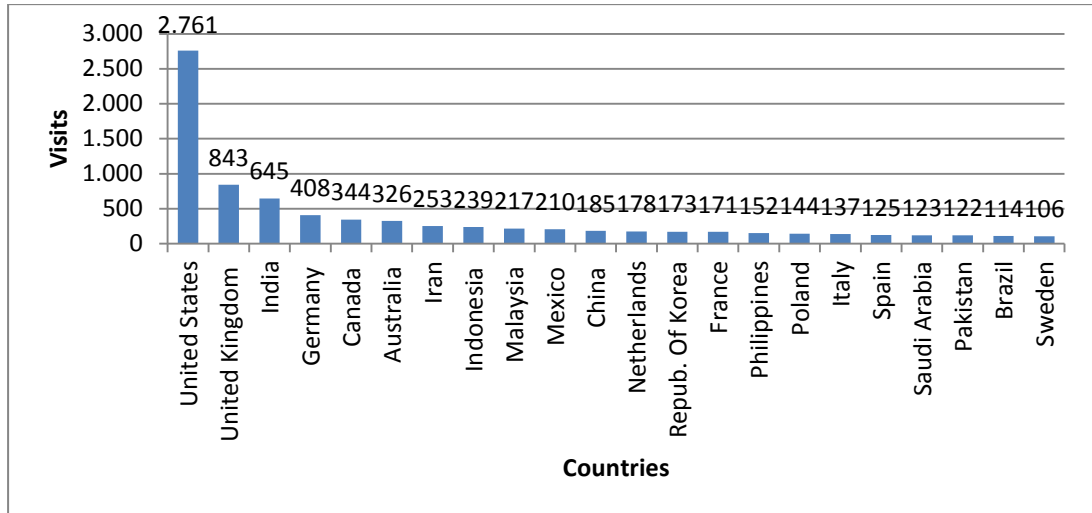
Figure 4.8 Top 22 METU OCW site visitor countries

In the METU OCW portal, the most accessed course is Mechanism Techniques from Mechanical Engineering department. The reason for this might be that the content of the course is satisfactory since course instructor has been developed the courses since 1974. The course is supported with multimedia materials like animations, simulations and pictures could be another reason for this frequent visiting.

4.2.3.5 Challenges Encountered

It can be said that this initiative has encountered fewer challenges than other initiatives. The most cited challenge similar to other OCW initiatives is convincing faculty members to share their course materials.

4.2.3.5.1 Persuasion of Faculty Members

The most important challenge is to convince faculty members to share their course materials on the OCW portal of the university. One of the practitioners indicated this issue in his speech as:

> *en büyük zorluğu ders bulmak hocaları oraya ders koymaya ikna etmek*
> *yoksa pek bir zorluğumuz yok. Teknik sorunlar çok kolay hallediliyor . Bilgi*

işlemin altyapısı güçlü orda bir sorunumuz yok, disk sorunumuz yok memory sorunumuz yok.internet bağlantısı sorunumuz yok. Hocalardan ders bulmak

The biggest challenge is to find a course, convince faculty to put the cours to there, otherwise we do not have any challenge. Technical problems are solved very easily. Infrastructure of technology support center is strong, we do not have any problem in there, we do not have diskspace problem, memory problem, Internet connextion problem, but finding a course from faculty…

Practitioner further clarified that even we could not taking courses from faculty members who stated the importance of the OCW movement in different context. He was complaining about this issue by saying:

Açık Ders Malzemeleri.çok önemlidir diyen bazı hocalarından bile dersini almak zor oluyor.mesela bir hocanın peşinden 2 seneden beri koşuyorum ben nerde yakalasam yemekte yakalasam soruyorum. Hani dersini verecektin tamam verecem işte oda işte bir notlarımı toparlıyayım falan diye geçiştiriyor. İcrata geldiğinde uğraşmayabiliyorlar.

It is difficult to take a course from a faculty even the ones who believe that open courseware is important. For example, I am dealing with a faculty for two years, I am asking to him wherever I come across like in lunch. I am asking "you were going to give a course", "ok, I will give, let me get y notes together, etc.." he parries. They might not deal with when they need to act

As a result, persuading faculty members to publish their courses in METU OCW portal is seen as the most significant challenge encountered in this initiative. There seem many reasons for this challenge. For instance, some faculty members use textbooks' slides or some of them indicated that there are some problems in their materials and still others do not want to spend efforts to this project. One of the practitioners indicated this situation as:

yani duyuru yapıyoruz yani haber bölüme gidiyor yani geçende başka bir toplantıda biz böyle bir şey yapıyoruz aaa haberimiz var bizde geldik falan diyolar ama actiona geçirme konusunda işte vermiyormusunuz dersleri

koyalım falan işte benim notlarımda biraz sorun bilmem ne var bazıları çekiniyor notlarını vermeye bazıları textbook un powerpoitlerini kullanıyor ondan dolayı kullanmak istemiyor kimisi de bu yaz vakti bununlamı uğraşacam diyor. Kimisi de they don't care durum boyle yani...

We are making announcements, the news arrives to department, recently, in a meeting, we said we were doing something like this [open courseware], "oh we heard about this, we came too" [they say], but in action phase, "you do not give [the course], let us submit the courses"[we say], "but there are some problems in my notes [they say], some of them hesitate to share their notes, some of them use the powerpoint slides of the textbook and therefore they do not want to give it, some of them think that "do I need to deal with this during the summer", and some of them do not care about is, the case is like this..

As can be seen, there are different reasons behind this unwillingness of faculty members or lack of interest to share their course materials.

4.2.3.6 Strategies Applied

There were a number of strategies applied in this initiative. These strategies were explained in details in following section.

4.2.3.6.1 "We can do everything for you" Strategy

In this strategy, Instructional Technology Support office, which is a dedicated unit for this initiative, contact with faculty members in different communication channels such as disscusion list, seminars or trainings. During this communication, the main message conveyed is that we can do everything for you as long as you accept to share your courses. This stated by proactitioners as:

En buyuk strateji: herseyi biz yapacagiz.hocalardan sadece dökümanları istiyoruz merak etmeyin diyoruz

The most effective strategy: We say "we will do everything, don not worry we only request [your] documents".

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With "everything" they mean technical issues such as converting hardcopy documents to digital or transferring courses from MetuOnline, which is LMS of the university, into OCW portal. They are not, for instance, dealing with clearance of copyrigth materials.

4.2.3.6.2 Integration of OCW Initiative in University's Working System

When we analyze the METU OCW project, one of the things which take attention that university integrated OCW process in the university information system. There are different signs for this integration. First of all, some faculty members actively use METU OCW portal as a learning management system of their courses. In this way, students can submit their assignment to the OCW portal. Different units of the university allocate their resources for the METU OCW project. For example, Computer Center of the university provides server and maintenance of OCW METU portal. This can be clearly seen in the statements of the interviewee:

> Interviewer: *Üniversitenin işleyen sistemine entegre olmuş bir durum var bir yapımı söz konusu.*
>
> Interviewee: *evet onuda baştan biz istedik tek başına ofisin yapacağı bir iş olmasın özellikle bu portalı kurarken bilgi işlem daire başk. Bu işte olmasını istemiştik ilk yaptığımız toplantı zaten bilgi işlem daire baş.daydı işte bu işin teknik kısmının ... orda olmasıydı.yerleşik olması ve mümkünse üniversitenin genel sisteminede entegre bir şekilde çalışmasını arzu ettiğimizi söylemiştik onlarda kabul etmişlerdi*
>
> Interviewer: *there is a structure integrated to the university's processing system, right?*
>
> Interviewee: *Yes, we wanted this at the beginning, the job should not be the work that the [open courseware] office does alone, especially while founding this portal, we wanted technical support unit be part of this job. The first meeting was already at technical support unit, fort he technical part of this work.. Being there [in university], being resident and if possible working as an integrated part of univeristy's general system was the things that stated that we desired, and they accepted it.*

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This integration is also supported by different mechanism as well. For instance, faculty members or university students can login the portal with their METU email account. By this way, students can also upload their assignment to course page or have opportunity to discuss issues on forums in the context of OCW courses.

4.2.3.6.3 Video Recordings of Class and Lab Sessions

In this initiative, ITS office made announcement about recording class or lab sessions into videos. For instance, general chemical courses were recorded in videos both English and Turkish version. Interestingly, the office could not meet the request for one semester since they have only two cameras, but those courses that could not be recorded into video were given priority in next semesters. This can be clearly seen from the comments of the practitioner.

> *Bahar döneminde duyuru yaptık derslerimiz çekebiliriz diye video kayıtlarını alabiliriz diye orda bazı hocalardan talep geldi hatta geçen bahar döneminde çok talep geldi bir kaç hocanın isteğini geri döndürmek zorunda kaldık.*

> *In the spring semester we announced that we can record the courses, make video records and take them, then some requests come from the faculty, moreover, many requests came in the last spring semester, we had to refuse some of the request of the faculty.*

The manager of the project stated that recording class sessions strategy is one of the working strategy that we applied in this project. ITS office particularly focused on lab sessions of general courses such as chemistry or calculus which are enrolled by more than one thousand students each semester. One of the main reasons was to increase students demand to such kind of materials. Because of this demand, practitioners expected that a pressure might be emerged and this pressure might affect faculty members to share their course materials. One of the practitioners reported this point as:

> *Çok genele verilen mesela fizik dersi çekildi onların hazırlanması aslında şöyle daha çok öğrencileri oraya çekmek Ogrencilerin demandini* [talebini]

*artirmak.hocaları değilde hani öğrenci orayı kulanırsa kendi hocasından da
isteyebilir gibi hani ordaki dersin açılması*

*[Courses] given generally, for example Physic was recorded, preparation of
them… in fact [the main purpose] to catch the attention of students, increase
the demand of the students, not faculty but if students use there, they might
request [similar thing] from their instructor, I mean opening that course
[requested one].*

4.2.3.6.4 Promoting METU OCW in Seminars and Trainings

There were different seminars or trainings provided in the context of the METU.
One of them is orientation seminars given to new faculty members organized by
Learning and Students Development office. Another one is trainings given by ITS
office to faculty member. One of the practitioners explained how they promote the
OCW initiative in her comments below

*seminerlerin başında reklamımızı yapıyoruz seminer derken öğretim
üyelerine öğretim teknolojileri için verdiğimiz seminerler var işte katılmak
istermisiniz falan oranın sonunda.*

*At the beginning of the semesters, we are making advertisement of us, by
seminar I mean there are seminars that we offer for faculty staff about
instructional technologies.*

At beginning or end of these trainings, ITS staff provides information about OCW
initiative in METU and they record name and contact information of interested
faculty members. Then they get contact with these people to explain further details
of the OCW project.

4.2.3.6.5 Financial Support

Unlike other initiatives around the World, there is no financial support for OCW
initiatives in Turkey. In this project, the manager of the project indicated that the
only budget they received is scientific research projects (BAP) provided by the
university. From this budget, they compensate their technical needs such as video
cameras, computers etc. He indicates this support in his comments as:

Finansman olarak aslında şöyle bir şey aslında şöyle bir şeyler oldu BAP projesi yazmıştım düzenli bir gelir olmasa bile bab projelerimiz ve önerilerimiz rektörlük tarafından kabul edilmişti o kapsamda malzeme alımı diye işte ders çekimleri yapıyorduk kamera bilgisayar onlar şey yapıldı bize sağolsun rektörlük o BAP proje kapsamında destek verdi. Taleplerimizi hep desteklediler.

Finance, in fact something happened like, I wrote a BAP Grant, although we do not have regular support, our BAP projects and proposals were accepted by vice presidentship. In that scope, buying materials, such as we were making course video records, video camera, computers, they were provided by vice presidentship, thanks to them, they supported us in scope of BAP Project. They always met our demands.

Although businness model is very important in OCW initiatives, most of the OCW projects in Turkey try to standalone with zero budget. Therfore finding this kind of budgets is important for OCW initiatives to be able to sutain themselves in long term.

4.2.3.6.6 Informing Faculty Members about Visitor Statistics of Top Five Courses

Informing instructors of top five visited courses is also one of the best working strategy stated by the proactitioners since faculty members were honered with recieving this kind of positive feedbacks from users. Faculty members satisfactions about this feedback was reflected on following comments of the manager :

bu ay sizin dersleriniz en çok ziyaret edilen dersler arasında işte ilk 5 ders arasında deyince onları çok onore ediyor.başka bir toplantımızda bir hoca ile görüşmüştük işte benim dersim bu ay ilk 5 e girmiş falan diye işte memnun olduklarını gösteriyorlar

one we say "in this month your course is in the top 5 among the most visited ones", it maket he honored. In another meeting, we met with a professor, "my course is in the top 5 in this month" [he says], this shows their pleasure.

In this strategy, practitioners said continuous update about visitor statistics is important. Each month they update the OCW portal statistics. In addition to informing top five visited courses, site statistics is also published everybody from OCW portal.

4.2.3.6.7 Administrative Support

Another important factor that affects the success of this kind of project is receiving support from university administrators said manager of the project. He stated that we have direct communication with university administration through responsible consultant and assistant of the rector. He stated this in his comments as:

> *yönetimin haberi var bununla ilgili destek veriyor bizde zaten ofisten sorumlu rektör danışmanımız var...bir ihtiyacımız olduğunda orası.destek veriyor*

> *management [of the university] has been informed, they support about it, we have already a vice presidential counselor who is responsible with the office, when we need something, they support us.*

The OCW project was also included in five-years univesity strategic plan. Following comments is both indicating strong relationship with university administration and including it in five years strategic plan of the university.

> Interviewer: *yönetimle çok sıkı diyaloğunuz mu var ?*

> Interviewwee: *var evet onları hani tanıtma onları bu konudan haberdar etme şeyimiz var. Şuan rektörün kendisi biliyor ondan sonra yeni önümüzdeki 5 yıllık stratejik plan mesala yapıldı.ordaki stratejik plandaki maddelerden bir tanesi o eklendik şey var maddelerden bir tanesi açık ders malzemelerine önem verilmesi geliştirilmesi maddesi.*

> Interviewer: *do you have a very close relationship with management?*

> Interviewwee: *yes we have, as least we [have chance of]advertising, informing situation. Right now, vice president know about it, then new 5 year-strategical plan was made. One of the items in that strategial plan,*

there is an additional thing, one of the item was to give importance to open courseware and improvement.

Another sign of university administration support was higlighted by one of the practitioners. She indicated that OCW project was mentioned in annual activities report of the unviersity administration and rewards we recieved were announced to all universty persnonnel from genral e-mail list. Apart from these supports, the manager of the project underlined that although we have university administration support, sometimes they have not positive look on some of our requests such as academic promotion or financial support.

4.2.3.6.8 Distribution of Brochure

Informing faculty members about the OCW project is another strategy used in the institution. However, the manager indicated that when we realized our distribution method was not working, so we changed the way we send the brochure. He explained this issue in his comments as:

> *Dönem başında diğer hazırladığımız broşürlerle beraber gönderilmesi önceki dönemlerde biz normal haftalık bültenin içine koyup gönderiyorduk bu hafta bülteni geliyor ya....sonra öğrendik bölümlere ulaşmamış falan. o zaman dedik geçen seneki uygulamamız oydu. Tek tek bütün Öğretim üyelerinin isimlerini çıkartalım zarf icine koyalım doğrudan isme gitsin*

> *"Sending [open courseware brochure] with other brochures at the beginning of the semester, in previous semesters, we were sending it by putting in the normal weekly news bulletin, you know "this week bulletin".. then we realized that [that brochures] have not arrived to departments. That time we decided, this was the last year's adminstration; to list all the faculty staff, put their names on envelopes and send them directly to that name.*

At beginning, the brochures were sending by including in This Week Bulletin of the university. However, when it was realized that these brochures did not reach to departments, they decided to send them directly to name of the faculty members by including in an envelope.

4.2.3.6.9 Using Social Networks Tools: METU OCW Facebook Group

METU OCW uses social network tools for expanding dissemination of course materials to as many people as possible. Visitors can share METU OCW through Twitter, Facebook and FriendFeed by using related links in the front-page of the METU OCW. In Facebook group (Figure 14), there are 191 members as of June, 2011. This group is managed by METU ITS office. Updates related with METU OCW (new courses, news from media) have been published through this social network group.

Figure 4.9 A screenshot from METU Facebook group

4.2.3.6.10 Integrating Production of Other Projects into OCW Portal: UNESCO Avicenna Project

The Avicenna Virtual Campus in Iraq (AVCI) project has been launched to enhance the quality of teaching learning processes through promoting partnerships between Iraqi and International Universities. UNESCO is supporting the project in colloboration with the Iraqi Ministry of Higher Education and Scientific Research (UNESCO, 2009). Figure 15 shows international universities which are in partnership with Iraqi universities. METU is one of this international partners. About 20 courses were developed both in English and Turkish in the scope of Avicenna project.
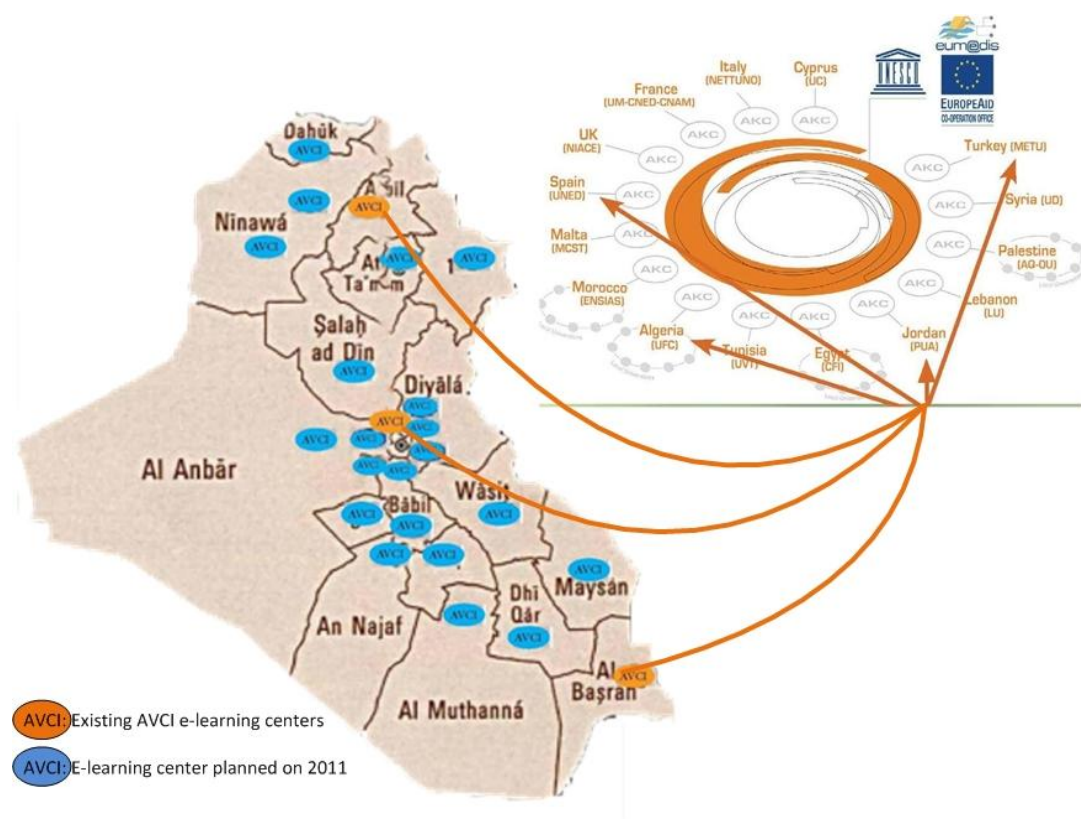
Figure 4.10 Coverage of Avicenna Virtual Campus in Iraq (UNESCO, 2009)

As can be seen from Figure 15, there are different Avicenna knowledge centers in Iraq. Three of them, university of Baghdad, Basra and Salahaddin, are currently active knowledge centers using courses developed in the context of Avicenna project. Ultimate goal is that each Iraqi university will produce their own modules and those modules will be shared among the institutions including in both the Avicenna and African Virtual Campus. METU OCW team also provides expert consultation support for the Avicenna project.

The courses developed in the scope of this project is also moved in METU OCW. For example, Web-Based Training: Design and Implementation Issues I and II are the courses developed during the Avicenna project. Another example is courses developed in the scope of TÜBA OCW project were also moved into the METU OCW portals.

4.2.3.6.11 Collaboration with China Open Resources for Education (CORE)

China Open Resources for Education (CORE) office began to serve a mirror copy of METU OCW. CORE is a non-profit organization and a consortium of universities consist of 26 IET Educational Foundation member universities and 44 China Radio and TV Universities. CORE has been supported by the China Ministry of Education (CORE, 2011). The CORE's METU OCW mirror site can be accessed from http://metu.core.org.cn/moodle/

Figure 4.11 A screenshot from CORE website which highlights mirror copy of METU OCW

4.2.4 Baskent University OpenCourseWare Initiative

4.2.4.1 Background information about the Baskent University

Baskent university is a private university founded in 1993. The university has 806 associate students, 7,535 undergraduate students and 831 graduate students as of 2011. It provides education through 11 faculties, 6 Vocational School, 7 institutes and 1 state conservatory (Baskent University, 2011).

4.2.4.2 OCW Activities

Although the University started the OCW activities after the first meeting held in March 2007, major steps were taken in 2009. The OER model which administrated by Baskent University is different. No personnel have been allocated to the project: one person deals with the project voluntarily. Moodle is used as both learning management system of the University and as an OCW portal. Opening an existing

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course as an OCW is straightforward. If the faculty members have a course in the learning management system, s/he can open this course to everybody by enabling guest access to the course.

4.2.4.3 Portal Structure

The Baskent OCW portal also has two interfaces. The first interface (Figure 4.12) provides background information about the OCW project, contact information, and links to other OCW portals. In July of 2011, about fifteen open courses were available. Three courses were developed by faculty members from Baskent University during the TÜBA pilot OCW project. The second interface is where all courses are listed. When course materials examined in terms of format, it is seen that most of the materials are in ".pdf" format which makes the reusability of these materials difficult.

Figure 4.12 A screenshot from Baskent University OCW portal

4.2.4.4 Course Submission

In this model, faculty members submit their course materials to the system directly. Workload decreases significantly, but this method prompts a problem with standardization, as faculty members submit their materials in varied formats. Students can also log in to the system and contribute to forum discussions or make comments on course materials

4.2.4.5 Challenges Encountered

Challenges encountered in this initiative can be divided into four main themes. These are lack of technical support, lack of awareness and interest, faculty members' concern and low-level administrative support.

4.2.4.5.1 Lack of Technical Support

In this initiative, the practitioner indicated needs of technical support from other units of the university (i.e. Computer Center). He reported that there are a number of components for initiating an OER project. Following quotation illustrates some of these components and need of technical support:

> *Şimdi alt yapıyla ilgili sıkıntılar oluyor temelinde... Biri size hadi ben moodle da kuruyum yapılanmasını da yapıyım size güzel bir kurumsal temada hazırlayayım, öğrencilerle öğretim elamanları nasıl ders içeriği oluşturabileceği ilgili mesela bununla ilgili dökümantosyonlar hazılıyayım diye hiç bir şey yok bunlarla ilgili sıfırdan sizin oluşturmanız gerekiyor en büyük sıkıntılardan bir tanesi o.*

> *Basically, there are problems related infrastructure. Someone [if say]let me install Moodle, make settlement of it, prepare a nice instiutional themes of it, for example something related how instructors and students create course content, prepare documentations about this… nothing is there related this, you need to create everything from the rough, one of the biggest challenge is this…*

As pointed out the practitioner initiating an OER project requires accomplishing many components. Therefore, receiving technical support from other units of the university is important.

4.2.4.5.2 Lack of Awareness and Interest among Faculty Members

Still another challenge encountered in this initiative is disseminating usage of the system and creating awareness among users. The practitioner stated this issue by saying:

> *Diğer bir sıkıntıda sistemin kullanılmasını sağlamak yaygınlaşmasını farkındalık yaratmasını sağlamak*
>
> *Another trouble is to ensure that the system is used, proliferate it, ensure that it raise an awareness…*

Another quotation is also highlighted this issue:

> Interviewer: *Başkentte tanımadığınız bir hoca gelipte dersini* [açıyor mu?]...
>
> Interviewee: *yok şuanda öyle bir şey olmadı [kişisel olarak tanımadığım hocalar ilgilenmedi] yani şuanda maalesef aktif* [Açık Ders malzemeleri projesi] *olmasına rağmen o farkındalık yok.yani o farkındalığı yaratabilmek için çok fazla toplantı yapmak lazım. 4-5 tane toplantı yaptık Açık Ders Malzemeleri ile ilgili katılım en fazla 10-15 kişi.*
>
> Interviewer: *Does any faculty member that you do not know personally come and open their course?*
>
> Interviewee: *no there is no instance like this* [no faculty member that I do not know personally] *interested in, I mean nowadays, unfortunately, although there is one* [OpenCourseware project], *there is no awareness, to raise that awareness, you need to make many meetings, we made 4-5 meetings related opencourseware, the participation was only 10-15 people at most.*

Related with this theme, the practitioner is also complaining about lack of interest of faculty members. He indicated that there is a low-level attendance to meetings or trainings about OCW project.

yani eğitim yaptık 3-4 tane en başta sistem nasıl kullanılır kullanılması ders malzemesi nasıl açık hale getirilir şeklinde katılımı çok yüksek hale getirmek pek mümkün değil malesef.

I mean we made a training, 3-4 times, at first [it was related] like how the system is used, how the courseware is rendered as open courseware, to increase the participation dramatically, this is not possible unfortunately.

In short, as seen clearly from quotations above, one of the challenges encountered in this initiative is lack of awareness and interest of faculty members about OCW project

4.2.4.5.3 Faculty Members' Concerns

As existed in other initiatives, there are different concerns of faculty members. One of the stated concerns in this initiative is clearance of copyrighted materials from faculty members 'course materials. He mentioned this issue during the interview by saying:

en büyük sıkıntı kendilerinin kullandığı malzemelerdeki telif ... hani başka birinin kitabından veya kendi kitabından aldığı bölümler var resimler var şeyler var onlarla ilgili sıkıntı var yani

the biggest challenge is copyright of the materials that they use… you know, there are places that they use parts or illustrations from another author's book, or their own book, there are some torubles related to them [those materials]

Another concern of faculty members experienced by the practitioner is that faculty members are concerned with the negative effect of OCW on marketability of their books. The practitioner stated his experiences about this issue as:

şöyle bir şeyde var benim yani yakın hocalar benim yakın bulduğum hocalar şunu açık ders malzemesi yapsana dediklerim mesala ben bunu kitap yapmayı düşünüyorum bu ders ile ilgili çalışmayı.

There is something like this; some intimate instructors, I mean the instructor that I believe we are close [to each other], the ones that I say "make this an opencourseware] for example, [they say] "I am planning to publish this course work a textbook"…

4.2.4.5.4 Low-level Administrative Support

Though university is supporting this initiative, their supports are limited to current university facilities. That is, university is supporting initiating this kind of project on behalf of their university name. However, they are not taking further actions for the sake of OCW project. An excerpt taken from their comment is summarizing the issue:

yani üni yönetiminin desteği şöyle yok yani onlar alt yapıyla ilgili destek sağlıyor şimdi bilgi işlemden bir şey yapılması gerekiyorsa. Yani belki ufak tefek ödüllerle destek artırılabilir yani o manadada akademik yükseltmeyle açık ders mal. puan vereceksin o gerçekten iyi bir destek olacaktır. mesela bu ADEM nin oluşturulması için bir destek ofisi oluşturulsa orda öğrenciler iyi bir burs karşılığında çalıştırılabilse böyle bir destek programı çok daha farklı olabilir

I mean, there is no support of university management; it is like they support us in terms of infrastructure, if there is something needed to be made in technical support unit. I mean, this support might be increased with small rewards, in this respect, promoting academical degree, scoring for each OpenCourseware, this will be a good support. For example, if an office is established to constitute this ADEM and if [they]have students worked there in return for a scholarship, this kind of support program might be much more different…

As can be seen from his comments, administrative supports are limited with the current state of the institution. The practitioner highlight needs of further regulations about dissemination this project across the university. For example, by giving reward such as academic points or establishing dedicated unit for the management of the project.

4.2.4.6 Strategies Applied

There are two main strategies and various sub-strategies applied to successful implementation of the initiative. Besides these, there are also desired strategies that the practitioner of the initiative wants to apply if the necessary condition were fulfilled.

4.2.4.6.1 Using Same Platform for Learning Management System of the Institution and OCW initiative

The first main strategy is a result of the OER model implemented in this project. It can be called as using same platform for both learning management system of the institution and OCW project. With this strategy, faculty members submit their course materials on their own to learning management system of the university. Then if s/he wants to open their course to public, it is enough to enabling quest access in the LMS. It would be appropriate to quote some from the practitioner to explain the strategy on his own words. The first quotation remarks using same platform for LMS and OCW project,

> *aynı öğretim yönetim sistemiyle açık ders malzemlerinin çalıştığı yer aynı ama şöyle bir şey var öğretim elemanları bazı derslerini açmak istemiyorlar ama açık olan dersler bizim açık ders malzemelri sayfamızdan yayınlanıor yani sonuç itibariyle aynı platformu kullanıyoruz*

> *the platform where learning management system and open courseware system are the same, but there is difference, some of the faculty staff do not want to open their course publicly, but the open courseware are published at our open courseware page, as a result, we are using the same platform…*

The second quotation indicates course submission by faculty members.

> *bizde şöyle farklı bir çalışma var öğretim elemanı kendi kullanıcı adı ve şifreyle sisteme kendi yüklüyor.o sisteme öğrencilerde kendi şifreleriyle girebiliyor aslında öğretim elemanı dersini konuk erişimine açık konumuna getirdiği anda o ders portalımızda* [açık ders malzemeleri portalı] *görünür*

hale geliyor.yani ekstra bir çalışma buna gerek olmuyor.yani kendi kendine giriş yapıyor

there is a different work of us, the faculty staff upload [files] with their own id and password. Students also ented the same system with their passwords, in fact when the faculty staff open their system for the access of guests, the that course become visible at our portal [open courseware portal].I mean there is no need for an extra work, [they] join [to system] by themselves…

Main justification behind this strategy is that the practitioner assumed that before having faculty members accustomed to use learning management system, it is difficult to be successful in the OCW project. Therefore, at first he wants to get faculty members accustomed the LMS and then he assumed faculty members would open their course materials just one click, enabling quest access to the course in Moodle learning management system.

He argued that there are two main advantages of this strategy for their case. First, this strategy is suitable for them because they do not have any dedicated unit for OCW project. Therefore, it is cost-effective way of initiating the OCW project in their university.

şöyle gördük bizim açık ders malzemleri için bir ekibimiz yok yani ADEM için ayrı bir birim kurmak zorunda kalmadık böylece yani… yani dersleri güncelleyen,girmek zorunda olan bir kişi yok [hocalar kendileri yapıyor] *açık ders malzemerininde hayatta kalmasının sağlıyor.*

We saw that we have not a team for open courseware, I mean, thus, we did not have to establish a sepereate unit for ADEM. I mean there is no one person who have to update, add the content. [faculty members do this, and this] maintain the life of open courseware [system]

Second, this strategy could provide sustainability of the project in the long term since faculty members submit their course materials to the LMS system and

decreasing the practitioner's workload. He declared the advantages of this strategy in his comments:

> *belki bu daha iyi oldu bizim şimdi başlamamız öğretim elemanının kendisinin girmesi o yükü ortadan kaldırıyor bugün belki totalde 5-6 sene sonra 200-400 tane dersimiz olsa bunları güncellemek için çok ciddi bir emek harcamamız gerekecek bunun içinde üniversiteninde bütçesi olmadığı için MITdeki gibi sonuçta her öğretim elemanının kendisi yüklemesi bizim için daha avantajlı*

> *May be this is better for us to start this time, faculty staff's entrance to the system, eliminates another burden. May ve after 5-6 years, if we have 200-400 courses, we will need to put a serious work to update the system. Since university has no budget for this, it is advantageous that instructor upload [their materials] like being in MIT.*

Although this strategy seems logical in the context of this initiative, the practitioner indicated it has disadvantages as well. For example, with this strategy, it is difficult to provide the standardization of the system because each faculty members could submit their materials in different formats and structure.

4.2.4.6.2 Making Syllabus Sharing Compulsory via Learning Management System of the Institution

The second main strategy is applied in the context of this initiative is making syllabus-sharing compulsory through learning management system of the institution. The practitioner stated that in normal condition as a faculty member, you have to submit your course syllabus, which explains outline of your course in detail, to faculties. Therefore, he decided to apply this strategy in the scope of the OCW project. He explained his experience about this strategy in the following quotation as:

> *eğitim fakültesi içinde şöyle bir çalışma yapmayı planladık zaten normalde bir syllabussınız yani ders izlencenizi fakülteye teslim etmeniz gerekiyor her dönem başında işte ben her hafta şunu işliyecem bunu işlicem diye hani en azından dedik ki bir syllabus ın öğretim yönetim sistemine konulmasını*

zorunlu hale getirelim. yani öğretim elemanı sisteme kullanıcı adı ve şifresiyle girsin her hafta ne yapacağını yazsın ve bunu zorunlu yapalım

we planned something for faculty of education like; [we say] "you have already a syllabus, you already need to submit your syllabus to the faculty [management]", at the beginning of every semester, [you say] "I will cover this in that week, and this in this week like this", we said that lets make uploading the syllabus to the system mandatory. I mean the faculty staff enter the system with their ID and password,, write down what they will do in every week, and we shall make it mandatory.

The basic rationale behind this strategy indicated by the practitioner is that with this strategy faculty members will become accustomed to use the LMS. In this way, they design their courses in time and if they want to open their course materials in OCW portal, it will be so easy.

Bunu [ders izlencesinin öğrenme yönetim sistemi üzerinde paylaşımını] *zorunlu yaptıktan sonra zaten yavaş yavaş birinci haftaya bir power point ekleyelim 2. hafta bir pdf ekleyeyim diyecektir çünkü öğrencinin öyle bir talebi olabilir.işte ders notlarını ordan paylaşabilir ppt yi paylaşır mısınız hocam işte ödevi internetten paylaşabilir misiniz diye bir istek var.zaten hazır platform var daha kolaylaşacağını ben düşünüyorum yani sıfırdan a dan z ye bir ders yükle demektense syllabusun zorunlu tutup ondan sonra kendisi heves edip...*

After making this [to share the syllabus on the learning management system] mandatory, one by one [we can say] "lets add the powerpoint slides to the first week", [they might say] "let me add the second week", because there might be demand of the students in this respect. I mean they might share their course notes, [we can say] "would you like to share ppt slides, sir", there is already demand of "would you like to share that assignment on Internet". There is an available platform, I believe that it will be more easier in the future, I mean instead of start from the rough and say "upload a course from a to z", [at the beginning] syllabus might be mandatory, and then they might be motivated [to share more]...

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He further indicates a new driver will emerge with this strategy. He calls this driver as a student pressure with this strategy. That is, when students access the course materials, they will request much more and this will create a pressure on faculty members. This pressure again compel the faculty members to increase amount of course materials on the system

4.2.4.6.3 Sub Strategies

In addition to these strategies, the practitioner is also used various sub-strategies. These are personal communication, e-mail list for announcement about development in OCW project, informative meeting with faculty members, and trainings about how to use LMS.

4.2.4.6.4 Desired Strategies

The practitioner of the initiative was also indicated some desired strategies which could accelerate efforts to promote OER projects. First, it can be a good opportunity for private universities to advertise by using OER movement. Second, he believes that if this project successfully implemented in one faculty, this will create an impact on students of other faculties. As a result, these students will make pressure to their instructors by referring this successful implementation. Finally, he mentioned about usual strategies that are mentioned in previous OCW initiatives such as using OCW as a prerequisite for providing academic promotion (Assist. Prof. or Assoc. Prof. degree), establishing a dedicated unit for OCW initiative or providing academic rewards for faculty members.

CHAPTER V

DISCUSSION AND CONCLUSION

5.1 MAJOR FINDINGS

The aim of this dissertation study is to provide policymakers, administrators, decision makers and key stakeholders in higher education with a research-based guidance about successful implementation of OER project. More specifically, this study aims at determining main incentives and barriers for freely publishing course materials in Turkish Universities from faculty members' perspective and determine perceived values of sharing course materials for faculty. In line with these aims, present study also aims to understand experience of pioneer OER initiatives in Turkey. By doing this, it is aimed to shed light on the successes and challenges that emerged as these initiatives evolved.

A multimethod research design, a quantitative methodology (survey research design) and qualitative methodology (multiple-case research design), each complete in itself and addressing different research questions of the study, was performed in the scope of this dissertation study. In the first part of the study, a survey developed and implemented to the faculty members from fifty-seven Turkish OpenCourseWare member universities to determine possible barriers, incentives, and benefits of OER movement from their perspective. A multiple-case research design was carried out for the second part of the study to understand experiences of the three national OER initiatives from the perspectives of practitioners.

5.1.1 The Major Findings of Part I

Great majority of the faculty members reported that they benefited from course materials (syllabus, reading pack, presentation files, quizzes etc.) which are

available on the Internet. Results showed that most of the faculty members (about 76%) indicated that at least half of their course materials are in digital format. On the other hand, only 18% of faculty members from 1548 faculty members stated that they do not publish their course materials on the web. Rest of them either already publish their course materials or want to publish their course materials on the web.

When respondents were asked possible barriers about publishing their course materials freely through the Internet, four factors were emerged. These are legal, technical, institutional and personal. Overall, legal barriers have greater mean scores, indicating high level of agreement about these barriers. Technical barriers, on the other hand, have the lowest mean scores, indicating low-level agreement about these barriers. Among these barriers, having/expecting problems protecting intellectual property rights of their own materials is seen as the most agreed barrier by faculty members. When demographics (institute, willingness to share, course load, academic experience, and university type) were investigated to determine whether a significant effect on faculty members' perceived barriers, results revealed that except for academic experience, all demographic variables have a significant effect on faculty members' perceived barriers.

Possible incentives about publishing course materials freely through the Internet were also categorized under four factors (supporting mechanisms, intellectual property protection mechanisms, compelling mechanisms and reward mechanisms). It is worth to see the impact of the legal issues on the results of the perceived incentives. That is, incentives that were mostly agreed by faculty members are related with the intellectual property protection mechanisms. In fact, the most agreed incentive is being informed when someone made changes on faculty members' materials and the second most agreed incentive is protecting course materials that faculty members share from plagiarism. Results revealed that except for academic experience and institute types, other variables (willingness to publish, course load, and university type) have a significant effect on faculty members' perceived incentives.

All mean scores are higher than 4.75 showing that academics have a very strong consensus for possible benefits of freely publishing course materials. The most agreed benefit of the OER among participants is the opportunity of getting benefited from experienced faculty members' experiences. Scaffolding inexperienced faculty members to design their courses and increase in amount of Turkish resources on Internet are the second most agreed benefits of the OER among faculty members sharing the same mean score.

5.1.2 The Major Findings of Part II

The most cited challenge indicated in three initiatives is convincing faculty members to share their course materials. They stated a number of reasons for this reluctance of faculty members to share their course materials. Some of them are clearance of copyrighted materials from faculty members' course materials, the negative effect of publishing their course materials on marketability of their books, lack of self-confidence about the quality of their course materials, fear of being criticized by their colleagues and publishing their course materials in OCW portal can devalue faculty members' course materials. Other challenges highlighted in these initiatives are lack of awareness and interest of faculty members, lack of technical support and lack of a dedicated unit and technical staff for OCW projects. Another issue that should be underlined that when OCW portals were examined it is realized that most of the materials are in .pdf format. So this makes the reusability of the materials difficult.

Although there are many challenges confronted by these initiatives, they are applying different strategies to accelerate efforts to promote the OCW project. It seems that the most effective strategies are establishing personal communication with faculty members, integrating OCW initiative in working system of the institution, allocating a dedicated unit. In addition to these strategies, practitioners have been applied different strategies in line with the contextual dynamics of their institutions. These are using same platform for learning management system of the institution and OCW initiative, making syllabus sharing compulsory via learning management system of the institution, video recordings of class and lab sessions,

informing faculty members about visitor statistics and increasing students' demand to create pressure on their instructors.

5.2 DISCUSSION

5.2.1 Unwillingness of Faculty Members to Share

Results indicated that majority of the faculty members reported that they have benefited from course materials (syllabus, reading pack, presentation files, quizzes etc.) which are available on the Internet. They have a very strong consensus for potential benefits of freely publishing course materials. This potential benefits of OER movement has been also well documented and demonstrated in the important international (OECD, UNESCO, the EU) and national (JISC in UK, NSF in USA) organization's reports and academic literature (Sclater, 2011; Smith & Casserly, 2006; Johnstone, 2005). Furthermore, survey findings revealed that faculty members want to publish their course materials on the Internet. However, what they say is different than what they do in reality. This can be understood from the results of the second part of the study. That is, the most cited challenge indicated by three initiatives of this study is unwillingness of faculty members to share their course materials. In their study, Usluel, Askar & Bas (2008) was also found similar result that faculty members use ICT mostly as for communication and searching information about their courses and the least, for publishing their lecture notes and the announcements about the course assignments, projects on the Internet. In OECD (2007) report is also underlined this issue that there appears to be a paradox in academia, though faculty members strongly emphasizes the importance of openly sharing, they "often takes an unresponsive attitude towards sharing or using educational resources developed by someone else" (p.60). As the findings of this study and the literature revealed that there may be several reasons for faculty members' unresponsive attitude towards sharing. First of all, though many faculty members are willing to share their work, they are often hesitant because they do not know how to do this without losing all their rights (Hylen, 2006; Yuan, MacNeill & Kraan, 2008). This findings is also confirm the results of this study that most of the items related with legal factor are the most agreed barriers by faculty members. Some of the other reasons which might cause unresponsive attitude towards sharing are difficulty in clearance of copyrighted materials from their course materials, the

negative effect of publishing their course materials on marketability of their books (Carson, 2006), lack of self-confidence about the quality of their course materials, fear of being criticized by their colleagues, devalue of faculty members' course materials when publishing in OCW platform (Lee, Albright, O'Leary, Terkla, & Wilson, 2008), lack of time, high workload and lack of self-confidence about the quality of their course materials.

5.2.2 Legal Barriers

One of the most significant results of this study is that most of the items related with legal factor are the most agreed barriers by faculty members. In fact, the greatest barrier for faculty members is having/expecting problems protecting intellectual property rights of their own materials and the second most agreed barrier is clearance of copyrighted materials from their course materials. Copyright problem is also often pointed out in many studies in the literature (i.e. Hylen, 2006; Pena, 2009; Matkin, 2006). As indicated by Bissell (2009),

> *Given that open licensing is a core infrastructural element of OER, it is not surprising that copyright and related intellectual property and licensing issues rank among the top concerns that people have about the open education movement* (p.97)

So it is normal that copyright and related intellectual issues are the greatest concern among faculty members, but it is crucial to understand the reasons of these concerns and develop strategies to address those concerns. There might be a number of reasons that most of the studies report copyright as a barrier. Some possible reasons of this are faculty members' concern about using their materials without attribution to them (Sclater, 2011; Smith & Casserly, 2006), complexities of existing copyright laws (Pena, 2009; Browne & Newcombe, 2009), difficulty in clearance of copyrighted content from their content (Hodgkinson-Williams, 2010), lack of awareness among faculty members about copyright issues (Yuan, MacNeill & Kraan, 2008). However, it is important to understand that why copyright is the most significant barriers among all in Turkey. As reported by Gurcan and Ozgur (2002), there is a prevalent unawareness about copyright issues and because of this there is prevalent infringement in Turkey. Therefore, there might be a trust problem among

academicians in Turkey. Even if some strategies such as CC license were used, faculty members concern that others will use their ideas without permission or credit to them. In OECD's study (2007), to be attributed as the owner of a resource when it is used or modified were ranked as the most important factor for respondents. This also illustrates importance of being acknowledged for participants. Slow bureaucratic procedures in legal system might another reason in Turkish context make the copyright problem worse. All these issues were highlighted in interviews with faculty members conducted in the context of this study.

5.2.2.1 The Effect of Demographics on Perceived Barriers

Results revealed that except for academic experience, all demographic variables (institute, willingness to share, course load, and university type) investigated have a significant effect on faculty members' perceived barriers in general. From these effects, it is normal to see that in contrast to faculty members who already publish their course materials on the web and those who want to publish, faculty members who do not want to publish their course materials on the web have a higher mean score on the barriers in general. Since when willingness level increase, the tendency of having agreement on barriers is normal. This is also valid for course load. However, for institute and university type, it is necessary to explain possible reasons for significant difference.

Results indicated that faculty members from social sciences have high level of agreement on perceived barriers than faculty members from natural and applied sciences and health sciences have. There might be a number of reasons behind this significant difference between institutes, but two main reasons were presentend in here. The first possible reason might be the content of the course. That is, in some courses, it is easier to develop supplementary materials. Therefore, nature of courses from social sciences might not allow faculty members to develop course materials as much as courses in other two institutes. The second reason might be that faculty members from natural and applied sciences and health sciences are likely to use technology more than faculty members from social sciences. Because departments related with technology such as computer engineering and electric and electronic engineering are located under these institutes.

As for significant difference on level of agreement on barriers in university type, results indicated that faculty members who are from foundation universities have a lower level of agreement on perceived barriers than faculty members who are from state universities. There might be a number of reasons for this significant mean difference, but one of the possible reasons might be that academic environment in foundation universities can be more flexible than academic environment in state universities. Another possible reason might be that there would be more beurocratic process in state universities than were in foundation universities.

5.2.3 Technical Barriers

When respondents were asked possible barriers about publishing their course materials freely through the Internet, four factors were emerged. These are legal, technical, institutional and personal. Despite some differences in factors, factors of this study are similar to factors in OECD study, technical, economic, social, policy-oriented and legal (OECD, 2007). Overall, in this study legal barriers have greater mean scores, indicating high level of agreement about these barriers. Technical barriers, on the other hand, have the lowest mean scores, indicating low-level agreement about these barriers. While technical and economic barriers are often indicated as significant obstacles in developing countries (OECD, 2007), as a developing country, in Turkey technical barriers appear to be not significant barrier. However, this result should be evaluated carefully because there were only two items under technical factor which are technical skills required and accessing hardware that they require. Although accessing hardware might not be problem in Turkish universities, technical skills required to develop materials should be measured in details.

5.2.4 Incentives

Possible incentives about publishing course materials freely through the Internet were also categorized under four factors (supporting mechanisms, intellectual property protection mechanisms, compelling mechanisms and reward mechanisms). It is worth to see the impact of the legal issues on the results of the perceived incentives. That is, incentives that were mostly agreed by faculty members are related with the intellectual property protection mechanisms. In fact, the most agreed

incentive is being informed when someone made changes on faculty members' materials and the second most agreed incentive is protecting course materials that faculty members share from plagiarism. Considering legal issues as a significant barrier among faculty members, it is not surprising that most agreed incentives is about intellectual property protection mechanism This finding also provides some further solution to copyright problem in that by establishing technical mechanism which inform faculty members when someone made changes on their materials.

Requesting a usable platform to share their course materials with a strong agreement indicates importance of developing usable platforms for materials sharing. With the development of web technologies, sharing has become much easier and there are now numerous platform which enable resources sharing. For example UDEMY's, Peer to Peer university's platforms are some of the good examples for course material sharing. Results of the incentive part are also guiding us about incentives to be provided for faculty members. Faculty members, for instance, prefer hardware or reward as an incentive more than financial oriented (i.e. copyright fee) incentive.

5.2.4.1 The Effect of Demographics on Perceived Incentives

Results show that except for academic experience and institute types, other variables (willingness to publish, course load, and university type) have a significant effect on faculty members' perceived incentives.

Considering willingness to share, faculty members who do not already publish their course material but want to publish them have higher level of agreement for incentives compared to faculty members who already publish and faculty members who do not want to publish their course materials. That is, faculty members who want to publish their course materials request incentives more than other two groups of faculty members.

As for course load, faculty members who have a high level of course load have greater level of agreement on incentives than faculty members who have low level of course load. However, there is no significant difference between mediaum level of course load and other two levels. Indicating, faculty members with high level of

course load needs incentives more than faculty members with lower level of course load.

When looking at university type, results indicates that faculty members from state universities' level of agreements on perceived incentives is higher than faculty members who are from foundation universities' level of agreement on perceived incentives. Considering with barriers, since faulty members from state universities have higher level of agreement on barriers, it is reasonable that they need more incentives to overcome those barriers.

5.2.5 Academic Promotion

New regulations in getting higher academic degrees can be considered. Although Ankara University initiative started to give academic points to faculty members who shared their course materials as OER, impact of this was not high because equivalent point can be taken from many other academic activities such as seminars, workshops etc. However, as suggested by different practitioners publishing course materials can be made a prerequisite condition for promoting to Assistance Prof. or Associate Prof. degrees. Stacey (2007) and Albright (2005) support this argument by indicating that recognizing OER activities in the promotion and tenure processes is likely to be affect success of the initiative in long term. On the other hand, though being an academician requires three main responsibilities, research, teaching and service, Turkish Higher Education system gives much more emphasize to research dimension of the profession. Therefore, different mechanisms are needed in the academy system which emphasizes teaching side of the profession as well.

5.2.6 Benefits

The most agreed benefit of the OER among participants is the opportunity of getting benefited from experienced faculty members' experiences. Scaffolding inexperienced faculty members to design their courses is the second most agreed benefits of the OER among faculty members. These findings indicated that faculty members might be more advantageous group of people who can benefit from OER movement. One of the most important reason of this might be that faculty members were better able to understand what others colleagues were doing (Preston, 2006, p.1) because they have a strong background knowledge in the same subject.

There are many potential benefits of OER movement especially for Turkish context. As founded in this study, one of the most rated benefits is increasing Turkish resources on the Internet. It can be argued that the OER movement might be one of the most fast, reliable and cost-effective way of increasing Turkish digital resources on the Internet. It is fast because existing digital resources can be used as an OER. The finding of this study is also showed that majority of faculty members has their course materials in digital format. Hence, transforming those resources into OER sometimes requires just one click. These course materials have to satisfy some level of quality because faculty members have already been using these digital resources in their courses. They are the experts of related fields. Even most of them dedicated many years to their own fields. Therefore, it is likely that reliability and quality of those resources would be high. Finally, it is cost-effective way since sharing and reusing make the costs for content development decreased and enabling better use of available resources (Stacey, 2007; OECD, 2007). Stacey further claims that OER movement leverage taxpayer's money since state universities are public institutions supported by taxes paid by citizen. Also because of unique nature of the digital content, it is easy to copy and distribute content across a wide range of network. Considering all these points, OER movement could be a cost effective way of increasing amount of Turkish digital content in the age of knowledge society.

5.2.7 Strategies

Although there are many challenges confronted by three initiatives investigated in the scope of this study, they are applying different strategies to accelerate efforts to promote the OCW project. It seems that the most effective strategies are establishing personal communication with faculty members, integrating OCW initiative in working system of the institution, and allocating a dedicated unit.

The findings of the second part of the study indicated that personal communication of managers of three initiatives is one of the working strategies for faculty recruitment. Considering Rogers's (1995) diffusion of innovation theory, communication channels are important in the innovation-decision process. One type of these channels is interpersonal channel involving face to face communication and which are relatively important especially in persuasion stage of the innovation-decision process (Rogers, 1995). Opinion leaders use this channel often. Therefore,

in the scope of these initiatives managers of the OCW projects and OCW staff might be considered opinion leaders and their personal communication might have influence on faculty members' decisions.

Integrating OCW initiative in working system of the institution might be an effective way in Turkish context. Unlikely other initiatives in the world such as MIT OCW, UK OpenLearn or Rice's Connexions initiatives receiving significant amount of financial support from different sources (i.e. the Mellon and the William and Flora Hewlett Foundations), finding financial support from not only their institution but also any other external resources seems very difficult. Therefore, using existing resources of the institutions is the one of the reasonable way for the long term sustainability of the OER initiatives. This issue is pointed out by different researchers (Sclater, 2011; Smith & Casserly, 2006). Lee, Albright, O'Leary, Terkla & Wilson (2008) touch upon this issue by stated that "institutionalizing OCW initiatives into the normal workflow, budget, and infrastructure of the hosting organization is key to enabling their long-term sustainability" (p.159)

Allocating a dedicated unit for OCW projects is also important factor which might affect success of the OCW projects. Results of this study showed that practitioners of the three initiatives indicated necessity of establishing a dedicated unit for OCW projects. MIT OCW projects, one of the most successful OCW project, is also managed by a group of dedicated people. As reported by Marion R. Jensen, the former director, one of the reasons for closing of Utah State OCW is because it no longer has any dedicated staff (cited in Parry, 2009).

5.3 CONCLUSION AND RECOMMENDATION

5.3.1 OER Project Leaders, OER Staff, University Administration

5.3.1.1 Unwillingness of Faculty Members to Share

Faculty members are the key players in this movement because they are producer and the owner of the course materials. It is therefore important to understand their concerns and establish strategies in line with their perspectives. Most of the reasons of unresponsive attitudes of faculty members were revealed in this study and literature. Therefore universities should aware of these reasons and can select

strategies from existing ones and develop strategies suitable with their context to address those concerns of faculty members. They should also investigate cultural specific issues in their institutions. New regulations should be made in policy documents to address those problems. In this sense, OCW staff can prepare an FAQ document that lists almost all concern faculty members have and find a reasonable answers and strategies to address those problems.

5.3.1.2 Copyright

Although the most significant barrier is copyright in Turkish context, there is no copyright clearance service provided by OCW staff. However, this issue is very important since it takes too much time. In fact, as claimed by Lynch (2001), "[t]he cost of clearing rights for these works is likely to be hundreds of times greater than the costs of actually digitizing the works". Therefore, OCW staff should find a solution to resolve faculty members' copyright clearance problem. Some possible solution is to get permission from copyright holder, providing a link to actual resources or replacement of the copyrighted materials with new ones. Explicit information about CC license should also be available in projects portals. Wizards, which enable faculty members to choose best licensing options for their works in an easy and quick way, can be developed or existing tools can be adopted into Turkish language.

5.3.1.3 Sustainability

Sustainability is one of the most important issues in OCW projects and as shown in the result of this study integrating OCW initiative in working system of the institution might be one of the comfortable ways of providing sustainability. Another finding of this study indicated that a dedicated unit should be allocated for this project, instead of assigning this project to individuals. This might also affect sustainability of the project greatly.

5.3.1.4 Personal Communication Channels

Personal communication of managers of three initiatives is one of the working strategies for faculty recruitment. Therefore, this strategy can be applied in departments and faculties with the help of opinion leaders (Rogers, 1995). Those

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people should be selected from faculty members who well recognized importance OCW movement and has experiences about sharing their course materials. Then those people could communicate with their colleagues about OCW initiative and tried to answer their questions and find solutions to their problems in collaboration with the OCW staff. One of the key strategies used in MIT OCW project is using hybrid staffing structure which means staff consisted of both centralized MIT OCW staff and department based staff. One important assumption behind this selection is that department-based staff has more familiar with the terms of course and has a personal relationship with faculty members (The MIT OpenCourseWare Story, n.d). Those department-based staff called as departmental liaison and they have very critical role in the success of MIT OCW since it provides relationships with faculty members and solving copyright and technical problems. They are especially seeking MIT alumni who have background knowledge about the course and familiarity with faculty members (Margulies, 2006)

In addition to personal communication channels, other communication channels should also be used. Mass communication channels (news, radio, TV so on) are especially important at knowledge stage of innovation-decision process (Rogers, 1995). Redundant information about OCW project should be provided through different channels.

5.3.1.5 Faculty Recruitment Strategies

While selecting appropriate strategies, it is important to consider cultural structures of your institutions. Besides working strategies, there are also different strategies that can be implemented. Following are some of the interesting strategies emerged in this study. These are using same platform for learning management system of the institution and OCW initiative, making syllabus sharing compulsory via learning management system of the institution, video recordings of class and lab sessions, informing faculty members about visitor statistics and increasing students' demand to create pressure on their instructors. Sometimes using a mini strategy can make significance impact on your initiative. Therefore, developing original strategies that are coherent with your institutions' culture is very important.

5.3.1.6 Reusability

Reusability of digital resources is very important for cost-effectiveness and sustainability of OER projects. Unfortunately, as results showed that course materials are not suitable for reusability in Turkish OER initiatives. This will negatively affect sustainability of the OER projects. Therefore, reusability issue should be seriously taken into consideration and formats that allow reusability such as xml should be used in OER portals.

5.3.2 YÖK, TÜBA, TÜBİTAK, DPT and UADMK

5.3.2.1 Copyright

Regulation in copyright is the most important step that might be taken for this movement. Creative Commons (CC) licenses should be integrated in Turkish copyright law. In this sense, it is important to state that CC licenses are based on the legislation on Intellectual Property of the USA. Therefore, the licenses should be adopted by Turkish lawyers in compatible with the regulations of Turkish legislations and should be translated in Turkish.

Terms used in license should be simple so that even an ordinary people can understand the meaning of the license easily. Also attaching a license should be very straightforward. Modules should be developed for course management system used in OER platforms to enable people to select best applicable license option for their works. In this point CC license can be considered as a very good example since its three layers structure (human-readable, machine-readable and lawyer-readable) enable copyright issues understood by not only lawyers but also ordinary producers of the content and even the web itself. YÖK might take more pro-active role in this process by regulating sanction about copyright infringement.

It is necessary to arrange more awareness-raising activities about copyright and open licensing. For example, promotional videos can be designed and developed with simple and clear terms.

It is clear that solving copyright problem is not an easy task, requiring changes in cultural norms, coordination of many institutions and awareness-raising from early education of people. Without a doubt, this takes long times. Although these kinds of

precautions should be taken in parallel, in short term it is important to emphasize altruistic nature of the OER movement. That is, benefits of this movement should be explained clearly to different stakeholders such as faculty members, university administrations, decision makers and public.

5.3.2.2 Benefits of OER movement

There are many potential benefits of OER movement especially for Turkish context and as findings of this study revealed one of the most rated benefits is increasing Turkish resources on the Internet. So it can be argued that the OER movement might be one of the most fast, reliable and cost-effective way of increasing Turkish digital resources on the Internet. This benefit can be especially taken into consideration by DPT since this institution has information society department and one of the aim of this department is to increase amount of Turkish resources on the web. Therefore, OER movement could be a very practical way of increasing Turkish resources on the Web and DPT can play an important role in this process.

5.3.2.3 Academic Recognition

Production of OER can be made a prerequisite condition for promoting to Assistance Prof. or Associate Prof. degrees. In this point, YÖK should play an active role in regulations of academic promotion system. When we look at the higher education system, it can be claimed that academic research play a major role on academic promotion. However, this mechanism should be revised in that teaching and learning activities such as opening course materials as OERs can be a part of academic promotion as well.

5.3.2.4 Life-long Learning

Considering learning as an everyday activity, it is important to highlight non-formal and informal learning activities. However, while in Turkey formal learning is always emphasized, non-formal and informal side of learning is underestimated. OER movement can close the gap between formal and non-formal, informal learning. Life-long learning might be one of the best places where OER movement can work. OER movement might also one of the most cost-effective ways of supporting life-

long learning activities. Therefore, it is necessary to emphasize this aspect of the movement and investigate its effective use in this respect.

5.3.2.5 Future of OER

There are some discussions about future of universities. Some of the scholars (Stacey, 2007) argue that OER movement can be a new university model. There are some attempts such as OER University or Peer-to-Peer University. In these models, university provides students with assessment and accreditation services and this called as assessment on demand. These systems have already been applied in corporate sectors such TOEFL exams or CISCO network certification where students can study themselves and take those exams whenever they want. Therefore, certificate programs should be designed around OER. This will increase the demand for these resources. Finally, it is important to take this movement seriously as a potential candidate of new university model for the future and investigate its potential in this respect.

5.3.2.6 Developing Innovative OER Tools

When OER initiatives in Turkey were examined, it is clear that traditional courses structures are reflected on OCW portals where most of the materials were designed to support teacher-centered classroom sessions. However, it is necessary to support user participation and interaction in OER initiatives where key formal learning features, student-student and student-teacher interaction, are absent. To do this, existing Web 2.0 tools can be integrated in these platforms or new innovative OER tool can be developed. With the help of these tools, users can interact with each other, build community around the courses, generate content and collaborate with other for developing new courses. Finally, OER platforms and contents should be designed to support mobile learning applications. For example, new release of the moodle (2.0.4) is developed suitable for mobile learning activities.

5.3.2.7 Openness Philosophy

It is good to see that most of the Turkish universities are using open source course management systems. This should be encouraged because this can decrease cost of projects and create an openness synergy around OER projects. In this sense,

governments and institutions should review and develop policies that promote openness and access.

5.3.2.8 Finding OER

There are many courses on the web but it is difficult to find them (Questier & Schreurs, 2008). Therefore, ULAKBİM can give support on aggregation of courses, highlighting popular courses, developing personalized curriculum with smart courses and connecting related courses (i.e. prerequisite courses such as Calculus can be connected with other related engineering courses).

5.3.2.9 Stakeholder Support

Research and development activities around the OER movement should be supported. Although DPT included the OER movement in its strategic plan and provided two years project support, this support should be continued for long-term sustainability of the OER activities. TÜBİTAK should also recognize OER activities and provide new support programs for research and development activities about OER initiatives. Finally, establishing support office like instructional technology support office should be encouraged and YÖK should provide financial, human

5.4 FUTURE RESEARCH

Since OER is relatively young movement, numerous studies can be conducted in this field. However, in this section main topics of research that further enlightens OER field and help the development of the field, particularly in Turkish context, are listed below.

First, despite its promises, little is known about impact of OER movement on teaching and learning activities. Therefore, one of the important research topics to be investigated is OER impact studies. In these studies, researchers can try to understand how those resources are used in teaching and learning activities and how they can facilitate and enhance learning.

Reusability of digital resources is another very important topic for cost-effectiveness and sustainability of OER projects. However, results of studies show that people are

not willing to reuse other's materials. Therefore, studies that investigate main reasons behind this reusability problem should be given priority in future research studies.

Since sustainability is one of the main problems of the OER initiatives, studies investigating dynamics of developing sustainable models should be supported as well. In this sense, different sustainable OER models can be developed and tested.

Another potential research topic to be investigated can be learner-centered studies. User behaviors of OER use and production can be explored. User visiting statistics can be a useful source of data in this kind of research studies.

OER studies should not be limited with higher education settings, it should be expanded other learning settings as well. Specifically lifelong learning opportunities of OER movement should be investigated.

Studies on UADMK courses published in the scope of DPT project can also be a good opportunity for research studies in Turkish context. Especially, studies, exploring sustainability of those courses, reusability of the materials, users' statistics and innovative quality control mechanisms to be administrated might be priority topics of research in this context.

Finally, studies that investigate characteristics of people who want to share and who do not want to can also be a priority topic of research in OER field. In this kind of studies, it would be better to turn the focus on why people share rather than what should be given to people to share their resources. Qualitative studies that enable us to understand reasons of sharing and not sharing in depth might be a good method of study in this sense.

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TURKISH VERSION OF THE QUESTIONNAIRE

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1. BÖLÜM: Aşağıdaki soruları cevaplarken, lütfen sizin için en uygun seçeneği (☑) işaretleyiniz.

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1. Web üzerinden herkese açılan ders kaynaklarından (ders izlencesi-syllabus, okuma seti, sunum dosyaları, sınav soruları vb.) hiç yararlandınız mı?

☐   Evet

☐   Hayır (Bu seçeneği işaretlediyseniz, lütfen **4.** soruya geçiniz)

2. Bu ders kaynaklarına nereden eriştiniz? (Birden fazla seçenek işaretleyebilirsiniz.)

☐   Arama motorundan (örn: Google)

☐   Kişisel web sayfasından

☐   Bölüm web sayfasından

☐   Üniversite web sayfasından

☐   Açık eğitim/ders kaynakları arşivinden (örn: MIT, MERLOT)

☐   Diğer (Lütfen belirtiniz):_____

3. Bu ders kaynaklarını hangi amaçlar için kullandınız / kullanıyorsunuz? (Birden fazla seçenek işaretleyebilirsiniz)

☐   Eğitim-öğretim amaçlı

☐   Akademik çalışmalarımda

☐   Kişisel gelişimimde

☐   Diğer (Lütfen belirtiniz):_____

4. Ders kaynaklarınızın ne kadarı sayısal formattadır (örn: .pdf, .doc., .swf vb.)?

☐ Tümü   ☐ Büyük bir bölümü   ☐ Yaklaşık yarısı ..☐ Az bir bölümü   ☐

Hiçbiri (Bu seçeneği işaretlediyseniz lütfen **2. Bölüm'e** geçiniz)

5. Ders kaynaklarınızı web üzerinden yayınlıyor musunuz?

☐ Evet, yayınlıyorum

☐ Hayır, ama yayınlamak isterim

☐ Hayır, yayınlamayı <u>düşünmüyorum</u> (Bu seçeneği işaretlediyseniz, **lütfen 2. Bölüm'e** geçiniz)

6. Bu kaynaklara başkalarının erişim durumu nedir / nasıl olmasını istersiniz?

☐ Herkese açık / Herkese açmayı isterim

☐ Sınırlı / Sınırlamayı isterim

7. Bu kaynakları nerede bulunduruyorsunuz ya da bulundurmayı istersiniz? (Birden fazla seçenek işaretleyebilirsiniz)

☐ Kişisel web alanımda

☐ Bölümümün web alanında

☐ Üniversitemin web alanında

☐ Üniversitemin Öğretim Yönetim Sisteminde

☐ Diğer (Lütfen belirtiniz):_____

2. BÖLÜM (Engeller/Zorluklar): Ders kaynaklarının internet üzerinden herkesin erişimine açık olarak yayınlanmasına ilişkin olası engeller aşağıda sıralanmıştır. Lütfen sizin için uygun seçeneği, sunulan "altı basamaklı ölçekte" işaretleyerek belirtiniz.	Hiç KatılMIYORUM	KatılMIYORUM	Kısmen KatılMIYORUM	Kısmen Katılıyorum	Katılıyorum	Tamamen Katılıyorum
1	Yeterli zamana sahip değilim.	1	2	3	4	5	6
2	Bana ait olan materyallerin telif haklarının nasıl korunacağı konusunda sorunlar yaşıyorum / yaşayacağımı düşünüyorum.	1	2	3	4	5	6
3	Digital (sayısal) ortamda materyal geliştirmek için gerekli teknik becerilere sahip değilim.	1	2	3	4	5	6
4	Gerekli teknik donanıma (bilgisayar, tarayıcı vb.) sahip değilim.	1	2	3	4	5	6
5	Gerekli maddi teşviğin olmadığını/olmayacağını düşünüyorum.	1	2	3	4	5	6
6	Ders yükümün fazla olduğunu düşünüyorum.	1	2	3	4	5	6
7	Rakabetin yüksek olduğu böyle bir ortamda sahip olduğum birikimleri herkesle paylaşmanın risk olduğunu düşünüyorum.	1	2	3	4	5	6
8	Ders kaynaklarını herkese açık bir şekilde paylaşmakla aşırmacılığın (intihal) artacağını düşünüyorum.	1	2	3	4	5	6
9	Bana ait olmayan bazı materyallerin telif haklarının nasıl sağlanacağı konusunda sorunlar yaşıyorum / yaşayacağımı düşünüyorum.	1	2	3	4	5	6
10	Üniversite yönetiminin desteğinin olmadığını/olmayacağını düşünüyorum.	1	2	3	4	5	6

11	Üniversite yönetiminin ders kaynaklarının paylaşılması yönünde bir politikasının olmadığını düşünüyorum.	1	2	3	4	5	6
12	Üniversitemde yeterli teknik altyapının olmadığını düşünüyorum	1	2	3	4	5	6
13	Üniversitemdeki öğretim elemanlarının istekli olmadığını/olmayacağını düşünüyorum	1	2	3	4	5	6

3. BÖLÜM (Teşvik Edici Yöntemler/Kolaylaştırıcılar): Ders kaynaklarının internet üzerinden herkesin erişimine açık olarak yayınlanmasına ilişkin teşvik edici yöntemler aşağıda listelenmiştir. Lütfen sizin için uygun seçeneği, sunulan "altı basamaklı ölçekte" işaretleyerek belirtiniz.		Hiç KatılMIYORUM	KatılMIYORUM	Kısmen KatılMIYORUM	Kısmen Katılıyorum	Katılıyorum	Tamamen Katılıyorum
1	Öğretim elemanlarının kendi dersleri ile ilgili materyal geliştirmesi için maddi destek (telif ücreti gibi) sağlanmalıdır.	1	2	3	4	5	6
2	Öğretim elemanlarına kendi dersleri ile ilgili materyal geliştirilmesi için donanımsal destek (bilgisayar, tarayıcı vb.) sağlanmalıdır.	1	2	3	4	5	6
3	Öğretim elemanlarının kendi dersleri ile ilgili materyal üretme çabaları akademik yükseltme kriterleri arasına alınmalıdır.	1	2	3	4	5	6
4	Fakültelere ya da rektörlüğe bağlı materyal geliştirmeyi destekleyici merkezler kurulmalıdır.	1	2	3	4	5	6
5	Öğretim elemanlarına kendi dersleri ile ilgili materyal üretebilmesi için eğitimler verilmelidir.	1	2	3	4	5	6
6	Ders kaynaklarının paylaşımı için kullanımı kolay bir ortam oluşturulmalıdır.	1	2	3	4	5	6
7	Öğrencilerin asistanlığıyla/yardımıyla, öğretim elemanlarına destek sağlanmalıdır.	1	2	3	4	5	6
8	Ders kaynaklarını paylaşmak zorunlu olmalıdır.	1	2	3	4	5	6
9	Ders kaynakları, ülke genelinde tek bir platformdan (örn: ULAKBİM) yayınlanmalıdır.	1	2	3	4	5	6

10	Paylaştığım ders kaynakları hiçbir şekilde **değiştirilmemelidir.**	1	2	3	4	5	6
11	Paylaştığım ders kaynakları aşırılmaya (intihale) karşı korunmalıdır.	1	2	3	4	5	6
12	Ders kaynaklarını kalite yönünden denetleyen bir sistem kurulmalıdır.	1	2	3	4	5	6
13	Paylaştığım ders kaynaklarının kimin tarafından kullanıldığı tarafıma bildirilmelidir.	1	2	3	4	5	6
14	Paylaştığım ders kaynaklarında değişiklik yapıldığında haberdar olmalıyım.	1	2	3	4	5	6
15	Paylaştığım ders kaynakları kendi üniversitemin oluşturduğu bir platformdan yayınlanmalıdır.	1	2	3	4	5	6
16	Ders kaynaklarını yayınlamayı teşvik edici ödüller verilmelidir.	1	2	3	4	5	6

4. BÖLÜM (Potansiyel Faydalar/ Muhtemel Katkılar): Ders kaynaklarının internet üzerinden herkesin erişimine açık olarak yayınlanmasına ilişkin olası faydalar, maddeler halinde aşağıda listelenmiştir. Lütfen sizin için uygun seçeneği, sunulan "altı basamaklı ölçekte" işaretleyerek belirtiniz.		Hiç KatılMIYORUM	KatılMIYORUM	Kısmen KatılMIYORUM	Kısmen Katılıyorum	Katılıyorum	Tamamen Katılıyorum
1	Üniversitemizin gerek ulusal, gerekse uluslararası ortamda tanıtımına katkı sağlar.	1	2	3	4	5	6
2	Hayat boyu öğrenmeyi destekler.	1	2	3	4	5	6
3	Üniversite öğrencilerinin alacakları dersleri seçmeleri konusunda yardımcı olur.	1	2	3	4	5	6
4	Üniversiteye aday öğrencilerin seçecekleri bölümleri belirleme konusunda yol gösterici olur.	1	2	3	4	5	6
5	Bilgi kaynağı sıkıntısı yaşayan üniversitelere katkı sağlar.	1	2	3	4	5	6
6	Yeni öğretim üyelerinin derslerini tasarlaması konusunda fayda sağlar.	1	2	3	4	5	6
7	Üniversitelerdeki eğitim/öğretim seviyesini yükseltir.	1	2	3	4	5	6
8	Öğretim elemanlarının derslerini daha özenerek hazırlanmasını sağlar.	1	2	3	4	5	6
9	Üniversiteler sunduğu için daha güvenilir bilgilerin internet ortamında yer almasını sağlar.	1	2	3	4	5	6
10	Şeffaflık sağlar.	1	2	3	4	5	6
11	Ders içeriklerinin denetlenebilmesini sağlar.	1	2	3	4	5	6
12	Tecrübeli öğretim elemanlarının deneyimlerinden faydalanmayı sağlar.	1	2	3	4	5	6

13	Daha fazla kişinin denetiminden geçeceği için ders kaynaklarının kalitesinin artmasını sağlar.	1	2	3	4	5	6
14	Öğretim elemanları arasındaki iletişimin artmasını sağlar.	1	2	3	4	5	6
15	Herhangi bir ders için farklı bakış açılarını görmeyi sağlar.	1	2	3	4	5	6
16	Öğretim elemanlarının dersleri ile ilgili arşiv tutmalarına yardımcı olur.	1	2	3	4	5	6
17	İnternet ortamında Türkçe içeriğin artmasına yol açar.						

5. BÖLÜM (Kişisel Bilgiler):		
A. Cinsiyetiniz: ☐ Bay ☐ Bayan		B. Bölümünüz:... ......
C. Ünvanınız: ☐ Prof. ☐ Doç. Dr. ☐ Yrd. Doç. Dr..	☐ Öğretim Görevlisi ☐ Okutman ☐ Uzman ☐ Araş. Görv. ☐ Diğert	D. Akademik Deneyiminiz (Yıl):
E. Enstitünüz:...		F. Üniversiteniz: ....
G. Haftada ortalama kaç saat bilgisayar kullanıyorsunuz:...		H. Haftada ortalama kaç saat internet kullanıyorsunuz:............................... ..
I. Bir öğretim döneminde haftalık ders yükünüz: Güz............Bahar.............Yaz.........		
J Bu araştırma konusu ile ilgili daha ayrıntılı görüşlerinizi bizimle paylaşmak <u>isterseniz</u>, size ulaşabilmemiz için lütfen aşağıdaki bölümü doldurunuz. Ad, Soyad: .... E-posta:............................. Tel-no:... Yorumlarınız:		

ENGLISH VERSION OF THE QUESTIONNAIRE

PART 1: Please select (☑) the most appropriate answer for the following questions.

1. Have you ever benefited from open courses resources (syllabus, reading pack, presentation files, quizzes etc.) which are available on web?
☐ Yes

☐ No (If you select this option, please go 4th question)

2. Where do you access these resources? (You can select multiple options)
☐ Search engines (i.e. Google)

☐ Personal web page

☐ Department web page

☐ University web page

☐ Open Educational Resources (i.e. MIT, OpenLearn, MERLOT)

☐ Others (Please specify):_____

3. In what purposes did/do you use these resources? (You can select multiple options)
☐ Learning-teaching

☐ Academic studies

☐ Personal development

☐ Others (Please specify):_____

4. What is the proportion of your digital course materials (i.e. .pdf, .doc, . swf etc.)?

☐ All ☐ A great proportion ☐ About half ☐ Small amount

☐ Any (If you select this option, please go **2nd part** of the survey)

5. Do you publish your course materials via web?

☐ Yes, I do

☐ No, but I want

☐ No, but I do not think to publish (If you select this option, please go **2nd part** of the survey)

6. What is/will be access of others to these resources?

☐ Open to everybody/ I want to open to everybody

☐ Limited/ I want to limit

7. Where do you store these resources / where do you want to store these resources? (You can select multiple options)

☐ On my personal web page

☐ On my department web page

☐ On my university web page

☐ On my university Learning Management System

☐ Others (Please specify):_____

PART 2. (Barriers): Possible barriers for sharing course materials through web are listed below. Please select your choice in a six-item scale.		Totally Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Totally Agree
1	I do not have enough time	1	2	3	4	5	6
2	I have / expect some problems protecting intellectual property rights of my own materials.	1	2	3	4	5	6
3	I do not have technical skills to develop digital materials.	1	2	3	4	5	6
4	I do not have required hardware (computer, scanner etc.)	1	2	3	4	5	6
5	There is / will be no required (necessary) incentives.	1	2	3	4	5	6
6	My course load is too heavy.	1	2	3	4	5	6
7	It is risky to share my experiences with everyone in today's environment where competition is high.	1	2	3	4	5	6
8	Sharing course materials with everyone will increase plagiarism.	1	2	3	4	5	6
9	I have / expect some problems protecting the intellectual property rights of materials which do not belong to me.	1	2	3	4	5	6
10	There is/will be no support from my university for publishing course materials.	1	2	3	4	5	6
11	I do not think my university has a policy about publishing/sharing course materials.	1	2	3	4	5	6
12	There is no necessary technical	1	2	3	4	5	6

	infrastructure at my University.						
13	Faculty members at my university do not / will not have willingness to share course materials	1	2	3	4	5	6

PART 3. (Incentives/Enablers): Incentives about publishing course materials through internet for everyone to access are listed below. Please select your choice in a six-item scale.	Totally Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Totally Agree
1	Financial support (i.e. copyright fees) should be provided to faculty members for developing course materials.	1	2	3	4	5	6
2	Hardware (computer, scanner, printer etc.) should be provided to faculty members for developing their course materials.	1	2	3	4	5	6
3	Materials development effort of faculty members should be rewarded with academic ranking.	1	2	3	4	5	6
4	Instructional technology centers should be established to support materials development.	1	2	3	4	5	6
5	Trainings / workshops about materials developments should be arranged for faculty members.	1	2	3	4	5	6
6	A usable platform should be designed for sharing course materials.	1	2	3	4	5	6
7	Faculty members should be supported with the help of student assistants.	1	2	3	4	5	6
8	Sharing course materials should be compulsory.	1	2	3	4	5	6
9	Course materials should be published at one platform in Turkey.	1	2	3	4	5	6
10	Course materials that I shared are not altered in any way.	1	2	3	4	5	6

11	Course materials that I shared should be protected from plagiarism.	1	2	3	4	5	6
12	A system should be established to provide quality assurance.	1	2	3	4	5	6
13	I should be informed about who uses my course materials.	1	2	3	4	5	6
14	I should be informed about who uses my materials.	1	2	3	4	5	6
15	Course materials that I shared should be published through a platform which is developed my university.	1	2	3	4	5	6
16	A rewarding system should be established to encourage faculty members to publish their course materials.	1	2	3	4	5	6

	PART 4 (Potential Benefits): Benefits about publishing course materials through internet for everyone to access are listed below. Please select your choice in a six-item scale.	Totally Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Totally Agree
1	It makes contribution to advertisement of my university in national and international arena.	1	2	3	4	5	6
2	It supports life-long learning.	1	2	3	4	5	6
3	It helps university students to decide which courses to sign up for.	1	2	3	4	5	6
4	It guides prospective university students about determining the department they want to study.	1	2	3	4	5	6
5	It makes contribution to universities where educational resources are scarce.	1	2	3	4	5	6
6	It scaffolds inexperienced faculty members to design their courses.	1	2	3	4	5	6
7	It enhances quality of education in universities.	1	2	3	4	5	6
8	It compels/encourages faculty members to design their courses with the greatest of care.	1	2	3	4	5	6
9	More reliable resources will be on Internet since universities provide.	1	2	3	4	5	6
10	It provides transparency.	1	2	3	4	5	6
11	It provides an environment where courses can be controlled.	1	2	3	4	5	6
12	It is/will be possible to be benefited from experienced faculty members.	1	2	3	4	5	6

		1	2	3	4	5	6
13	Quality of course's resources will increase since more people will have a chance to examine the courses.	1	2	3	4	5	6
14	It enhances communication among faculty members.	1	2	3	4	5	6
15	It provides to see different aspect for any courses.	1	2	3	4	5	6
16	It helps faculty members to archive their courses.	1	2	3	4	5	6
17	It increases amount of Turkish resources on Internet	1	2	3	4	5	6

PART 5. Demographic Information	
A. Sex: ☐ Male ☐ Female	B. Department:.......................................
C. Title: ☐ Professor ☐ Associate Prof. ☐ Assitant Prof. ☐ Instructor ☐ Language Instructor ☐ Specialist ☐ Research Asisstant ☐ Other	D. Academic Experince (year).: ....
E. Institute:	F. University: ....
G. How long do you spend on the computer each week?:	H. How long do you spend on the internet each week? : :..
I Course load for each semester: Fall........... Spring ....Summer:	
J. If you would like to share your detailed ideas with us, please fill the following section. Name, Surname: .... E-mail:.......................... Tel-no:...................................... Comments:………………………………………………………………..	

APPENDIX C

INTERVIEW PROTOCOL FOR UADMK MEMBER UNIVERSITY REPRESENTATIVES

1. Ulusal açık ders malzemeleri projesinin faydalı olacağını düşünüyor musunuz?
   a. Düşünüyorsanız, sağlayacağı belli başlı faydaların neler olabilir?
   b. Düşünmüyorsanız, neden?
2. Bu projenin üniversitenizde uygulanma sürecinde karşılaşılacak olan problemler neler olabilir?
   a. Bu problemler nasıl aşılabilir?
3. Siz, vermiş olduğunuz bir dersin içeriğini ve materyallerini bu proje kapsamında yayınlamayı düşünür müsünüz?
   a. Düşünüyorsanız niye? Düşünmüyorsanız niye?
4. Açık ders malzemeleri projesinin geleceğini nasıl görüyorsunuz?

INTERVIEW PROTOCOL FOR FACULTY MEMBERS WHO WILLINGLY TO PUBLISH THEIR COURSE MATERIALS

Araştırma Sorusu: Öğretim elemanlarının internet üzerinden ders kaynaklarının paylaşılması konusundaki düşünceleri nelerdir?

_____

Görüşülen Kişi   : …………………………………

Görüşmeyi yapan   : …………………………………

Tarih & Saat   : …...…./…...…./ 2008 & ...… : …......

Görüşme Süresi   : …………….............................

Merhaba,

Adım Engin Kurşun, ODTÜ Bilgisayar ve Öğretim Teknolojileri Eğitimi Lisansüstü Programı'nda hem araştırma görevlisiyim hem de doktora öğrenimimi sürdürüyorum. Bu çalışmanın amacı öğretim elemanlarının ders kaynaklarının paylaşımı konusundaki algılarını ortaya çıkarmaktır.

Öncelikle bu çalışmamda görüşlerinizi benimle paylaşmayı kabul ettiğiniz için teşekkür ediyorum. Bu konudaki kişisel deneyimleriniz, görüş ve düşünceleriniz araştırmam için büyük önem taşımaktadır. Başlamadan önce bazı noktaları vurgulamak istiyorum. Yapacağımız görüşme sadece araştırma amaçlı kullanılacaktır. Bu çalışma sonucunda oluşturulacak dokümanlarda isminiz doğrudan ya da dolaylı olarak kullanılmayacaktır. Araştırma tamamlandıktan sonra ilgili analiz, sonuç ve tavsiyelerimizi eğer isterseniz sizlerle paylaşabiliriz. İzin verirseniz görüşmeyi kaydetmek istiyorum. Sizce sakıncası var mı? Sormak istediğiniz bir soru var mı?

1. Ne kadar süredir öğretim üyesi olarak görev yapıyorsunuz?

2. Çalıştığınız alan nedir?

3. Doktoranızı hangi üniversiteden aldınız?

4. Ağırlıklı olarak hangi seviyeye ders veriyorsunuz: ( ) Lisans   ( ) Yüksek Lisans

----

1. Derslerinizi işlerken ya da hazırlarken internet üzerindeki kaynaklardan ne ölçüde faydalanıyor musunuz? Neden?

2. Sizinle benzer ya da aynı dersi veren diğer akademisyenlerin ders web sitelerinden faydalanıyor musunuz?
    - Evet ise,
        i. En çok hangi noktalarda faydalanıyorsunuz? Nasıl faydalanıyorsunuz?
            - Ders izlencesi
            - Okuma setleri
            - Sınav soruları
            - Konu içerikleri

3. Açık Ders Malzemeleri/Kaynakları (OpenCourseWare) Projesini biliyor musunuz?
    - Evet ise;
        i. Bu konuda ne biliyorsunuz?

----

1. Üniversitenizde derslerinizde kullandığınız kaynakları (ders izlencesi, okuma seti, sunum dosyaları, sınav malzemeleri vb.) üniversitenin oluşturduğu bir sayfa üzerinden herkese açma konusu gündeme gelse, sizin bu kaynakları açma konusunda ki görüşleriniz ne olurdu?
    - Kendi ders(ler)inizi böyle bir uygulama kapsamında açmak ister miydiniz?

- Böyle bir projeye üniversitenizdeki akademisyenlerin katılımı noktasındaki düşünceleriniz nelerdir?

2. Sizce öğretim elamanları derslerini neden paylaşır? Neden paylaşmaz?

3. Derslerinizi herkese açık bir şekilde yayınlama sürecindeki deneyimlerinizden bahsedebilir misiniz?
   - Öğrencilerden aldığınız dönütler
   - Meslektaşlarınızdan aldığınız dönütler
   - Karşılaştığınız zorluklar (eğer varsa ürettiğiniz çözüm önerileri)

   3.a Derslerinizi herkese açık bir şekilde yayınlama süreci nasıl başladı?
   Alternatif soru: Sizi buna teşvik eden şey neydi.
   3.b Devamında bu süreci nasıl yönettiniz?

4. Üniversitelerde derslerde kullanılan kaynakların herkese açılmasının zararları olacağını düşünüyor musunuz? Evet, ise bu zararlar nelerdir?
   - Öğretim Üyelerini kolaycılığa alıştırması

5. Üniversitelerde derslerde kullanılan kaynakların herkese açılması hangi açılardan fayda sağlar?
   - Öğretim elemanı açısından,
   - Öğrenci açısından,
   - Ders kaynaklarının sağlandığı kurum açısından,
   - Toplum açısından

6. Üniversitelerde derslerde kullanılan kaynakların herkese açılması hususunda gördüğünüz engeller nelerdir?
   - Kaynak
     - İnsan gücü
     - Donanım / Yazılım
     - Destek

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- İdari

7. Öğretim üyesi olarak böyle bir uygulamaya katılmak için ne tür teşvik unsurları olmasını isterdiniz?
   - Kendiniz için
   - Başkaları için

8. Böyle bir projenin geleceğini nasıl görüyorsunuz?
   - Sürdürülebilirliği konusundaki düşünceleriniz nelerdir?
   - Genişlemesi noktasındaki düşünceleriniz (ilköğretim ve ortaöğretim kurumlarına)

9. Benim sorduklarımın haricinde eklemek istediğiniz bir husus var mı?

**INTERVIEW PROTOCOL FOR FACULTY MEMBERS WHO DO
NOT WILLINGLY TO PUBLISH THEIR COURSE MATERIALS**

Araştırma Sorusu: Öğretim elemanlarının internet üzerinden ders kaynaklarının paylaşılması konusundaki düşünceleri nelerdir?

_____

Görüşülen Kişi   : …………………………………

Görüşmeyi yapan   : …………………………………

Tarih & Saat   : …..…./…..…./ 2008 & ...… : …...

Görüşme Süresi   : ………………...........................

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Öncelikle bu çalışmamda görüşlerinizi benimle paylaşmayı kabul ettiğiniz için teşekkür ediyorum. Bu konudaki kişisel deneyimleriniz, görüş ve düşünceleriniz araştırmam için büyük önem taşımaktadır. Başlamadan önce bazı noktaları vurgulamak istiyorum. Yapacağımız görüşme sadece araştırma amaçlı kullanılacaktır. Bu çalışma sonucunda oluşturulacak dokümanlarda isminiz doğrudan ya da dolaylı olarak kullanılmayacaktır. Araştırma tamamlandıktan sonra ilgili analiz, sonuç ve tavsiyelerimizi eğer isterseniz sizlerle paylaşabiliriz. İzin verirseniz görüşmeyi kaydetmek istiyorum. Sizce sakıncası var mı? Sormak istediğiniz bir soru var mı?

5. Ne kadar süredir öğretim üyesi olarak görev yapıyorsunuz?

6. Çalıştığınız alan nedir?

7. Doktoranızı hangi üniversiteden aldınız?

8. Ağırlıklı olarak hangi seviyeye ders veriyorsunuz: ( ) Lisans   ( ) Yüksek Lisans

----

4. Dersleriniz ile ilgili kaynakları herhangi bir web sitesinden yayınlıyor musunuz?

   - Evet ise,
        i. Herkese açık mı?
       ii. Web adresi nedir?
      iii. Neden yayınlıyorsunuz?
   - Hayır ise,
        i. Neden yayınlamıyorsunuz?

5. Derslerinizi işlerken ya da hazırlarken internet üzerindeki kaynaklardan faydalanıyor musunuz?

   a. Evetse
        i. Nasıl?
       ii. Hangi amaçla?

6. Sizinle benzer ya da aynı dersi veren diğer akademisyenlerin ders web sitelerinden faydalanıyor musunuz?

   - Evet ise,
        i. En çok hangi noktalarda faydalanıyorsunuz? Nasıl faydalanıyorsunuz?
           - Ders izlencesi
           - Okuma setleri
           - Sınav soruları

- Konu içerikleri

7. Açık Ders Malzemeleri/Kaynakları (OpenCourseWare) Projesini biliyor musunuz?

- Evet ise;

    i. Bu konuda ne biliyorsunuz?

----

10. Üniversitenizde derslerinizde kullandığınız kaynakları (ders izlencesi, okuma seti, sunum dosyaları, sınav malzemeleri vb.) üniversitenin oluşturduğu bir sayfa üzerinden herkese açma konusu gündeme gelse, sizin bu kaynakları açma konusunda ki görüşleriniz ne olurdu?

- Kendi ders(ler)inizi böyle bir uygulama kapsamında açmak ister miydiniz?
- Böyle bir projeye üniversitenizdeki akademisyenlerin katılımı noktasındaki düşünceleriniz nelerdir?

11. Sizce öğretim elamanları derslerini neden paylaşır? Neden paylaşmaz?

12. Üniversitelerde derslerde kullanılan kaynakların herkese açılmasının faydalı olacağını düşünüyor musunuz? Evet, ise hangi açılardan fayda sağlar?

- Öğretim elamanı açısından,
- Öğrenci açısından,
- Ders kaynaklarının sağlandığı kurum açısından,
- Toplum açısından.

13. Üniversitelerde derslerde kullanılan kaynakların herkese açılmasının olumsuz sonuçları olacağını düşünüyor musunuz? Evet, ise bunlar nelerdir?

- Öğretim Üyelerini kolaycılığa alıştırması
- İntihal olaylarının artması

14. Üniversitelerde derslerde kullanılan kaynakların herkese açılması hususunda gördüğünüz engeller nelerdir?

- Kaynak

- - İnsan gücü
  - Donanım / Yazılım
  - Destek
- İdari

15. Öğretim üyesi olarak böyle bir uygulamaya katılmak için ne tür teşvik unsurları olmasını isterdiniz?
   - Kendiniz için
   - Başkaları için

16. Böyle bir projenin geleceğini nasıl görüyorsunuz?
   - Sürdürülebilirliği konusundaki düşünceleriniz nelerdir?
   - Genişlemesi noktasındaki düşünceleriniz (ilköğretim ve ortaöğretim kurumlarına)

17. Benim sorduklarımın haricinde eklemek istediğiniz bir husus var mı?

APPENDIX F

SCREENSHOOT FROM FIRST SECTION OF THE ONLINE SURVEY

Figure 6.1 Screenshoot from first section of the online survey

APPENDIX G

## SCREENSHOOT FROM SECOND SECTION (BARRIER) OF THE ONLINE SURVEY

Figure 6.2 Screenshoot from second section (Barrier) of the online survey

APPENDIX H

SCREENSHOOT FROM THIRD SECTION (INCENTIVE) OF THE ONLINE SURVEY

Figure 6.3 Screenshoot from third section (incentive) of the online survey

**SCREENSHOOT FROM FOURTH SECTION (BENEFIT) OF THE
ONLINE SURVEY**

Figure 6.4 Screenshoot from fourth section (benefit) of the online survey

APPENDIX J

SCREENSHOOT FROM FIFTH SECTION (DEMOGRAPHIC) OF THE ONLINE SURVEY

Figure 6.5 Screenshoot from fifth section (demographic) of the online survey

APPENDIX K

OFFICIAL PERMISSION FOR THE SURVEY TAKEN FROM METU

1956

Orta Doğu Teknik Üniversitesi
Middle East Technical University

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Graduate School of
Natural and Applied Sciences

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Sayı: B.30.2.ODT.0.AH.00.00/126/ 12 – 6 7

20 Ocak 2011

Gönderilen: Doç.Dr. Kürşat Çağıltay

Bilgisayar ve Öğretim Teknolojileri Eğitimi

Gönderen :   Prof. Dr. Canan Özgen

IAK Başkan Yardımcısı

İlgi   :   Etik Onayı

"Türkiye'deki Yükseköğretimde Açık Eğitim Kaynakları Hareketi: Bir Politika Çerçevesinin Geliştirilmesi" başlığı ile yürüttüğünüz çalışmanız "İnsan Araştırmaları Etik Komitesi" tarafından uygun görülerek gerekli onay verilmiştir.

Bilgilerinize saygılarımla sunarım.

Etik Komite Onayı

Uygundur

20/01/2011

Prof.Dr. Canan ÖZGEN
Uygulamalı Etik Araştırma Merkezi
(UEAM) Başkanı
ODTÜ 06531 ANKARA

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FORMAL LETTER SEND TO UADMK MEMBER UNIVERSITIES

ULUSAL AÇIK DERS MALZEMELERİ KONSORSİYUMU

Sayı: B.02.TBA.0.12-107.04/2020   14/07/2009

Konu: Öğretim Elemanları'nın Ders Kaynaklarının Paylaşılması ile İlgili Görüşleri

Sayın Prof. Dr.

ÜNİVERSİTESİ REKTÖRÜ

Ülkemizde Türkiye Bilimler Akademisi'nin (TÜBA) girişimiyle, Yüksek Öğretim Kurumu (YÖK) ve Türkiye Bilimsel ve Teknolojik Araştırmalar Kurumu (TÜBİTAK)'nun destekleriyle Mayıs 2007'de başlatılmış olan Açık Ders Malzemeleri hareketi ile ilgili çalışmalar, kurumunuz dahil 47 üniversitenin temsil edildiği Ulusal Açık Ders Malzemeleri Konsorsiyumu (UADMK) öncülüğünde devam etmektedir. Bu kapsamda, ilgili projenin başarılı bir şekilde hayata geçirilmesi için öğretim elemanlarımızın ders kaynaklarının paylaşılması ile ilgili görüş ve eğilimlerinin belirlenmesi büyük önem arz etmektedir. Bu konuda sürdürülen araştırma çalışması kapsamında hazırlanan ve **aşağıda İnternet adresi bulunan** elektronik ankete Üniversitenizde **ders veren tüm öğretim elemanlarına** duyurulması yoluyla katılımlarının sağlanması konusunda desteğinize ihtiyaç duyulmaktadır.

Anket 01.10.2009 tarihine kadar erişime açık tutulacaktır. Gerektiğinde bu tarih uzatılacaktır. Anket'e katılımın arttırılması için, yapılacak olan duyuruların, üniversiteniz **ana web sayfasından** yapılması, ayrıca **e-posta yoluyla** da öğretim

elemanlarına duyurulması konusunda destekleriniz beklenmektedir. Yapılacak duyuru ile ilgili hazırlanmış metne aşağıdaki ilgili linkten ulaşabilirsiniz. Ulusal Açık Ders Malzemeleri Projesi çalışmalarına sağladığınız katkılar için teşekkür ederiz.

Saygılarımla

Prof. Dr. Ali Ekrem ÖZKUL

UADMK Başkanı

İlgili ankete ve duyuru metnine erişim için kullanılacak bağlantı adresleri

Konsorsiyum ana sayfası	http://uadmk.ulakbim.gov.tr/
Ankete doğrudan erişim adresi	http://uadmk.ulakbim.gov.tr/anket.htm
Duyuru metnine erişim için	http://uadmk.ulakbim.gov.tr/duyuru.htm

APPENDIX M

LIST OF 47 UADMK MEMBER UNIVERSITY

Table 6.1 List of 47 UADMK member university

No	University Name	No	University Name
1	ABANT IZZET BAYSAL ÜNIVERSITESI	26	ISTANBUL TICARET ÜNIVERSITESI
2	ADNAN MENDERES ÜNIVERSITESI	27	ISTANBUL ÜNIVERSITESI
3	ANADOLU ÜNIVERSITESI	28	KADIR HAS ÜNIVERSITESI
4	ANKARA ÜNIVERSITESI	29	KAHRAMANMARAŞ SÜTÇÜ IMAM
5	ATATÜRK ÜNIVERSITESI	30	KARADENIZ TEKNIK ÜNIVERSITESI
6	ATILIM ÜNIVERSITESI	31	KIRIKKALE ÜNIVERSITESI
7	BALIKESIR ÜNIVERSITESI	32	KOÇ ÜNIVERSITESI
8	BAŞKENT ÜNIVERSITESI	33	MERSIN ÜNIVERSITESI
9	BOĞAZIÇI ÜNIVERSITESI	34	MUĞLA ÜNIVERSITESI
10	CUMHURIYET ÜNIVERSITESI	35	MUSTAFA KEMAL ÜNIVERSITESI
11	ÇANKAYA ÜNIVERSITESI	36	NIĞDE ÜNIVERSITESI
12	ÇUKUROVA ÜNIVERSITESI	37	ORTA DOĞU TEKNIK ÜNIVERSITESI
13	DICLE ÜNIVERSITESI	38	OSMANGAZI ÜNIVERSITESI
14	DUMLUPINAR ÜNIVERSITESI	39	PAMUKKALE ÜNIVERSITESI
15	EGE ÜNIVERSITESI	40	SABANCI ÜNIVERSITESI
16	ERCIYES ÜNIVERSITESI	41	SELÇUK ÜNIVERSITESI
17	FATIH ÜNIVERSITESI	42	SÜLEYMAN DEMIREL ÜNIVERSITESI
18	FIRAT ÜNIVERSITESI	43	TOBB EKONOMI VE TEKNOLOJI ÜNIVERSITESI
19	GAZI ÜNIVERSITESI	44	TRAKYA ÜNIVERSITESI
20	GAZIANTEP ÜNIVERSITESI	45	YEDITEPE ÜNIVERSITESI
21	GAZIOSMANPAŞA ÜNIVERSITESI	46	YILDIZ TEKNIK ÜNIVERSITESI
22	GEBZE YÜKSEK TEKNOLOJI ENSTITÜSÜ	47	ZONGULDAK KARAELMAS ÜNIVERSITESI
23	HACETTEPE		

	ÜNIVERSITESI		
24	HARRAN ÜNIVERSITESI		
25	INÖNÜ ÜNIVERSITESI		

APPENDIX N.

LIST OF NEW UADMK MEMBER UNIVERSITIES

Table 6.2 List of new UADMK member universities

No	University Name
1	ON DOKUZ MAYIS ÜNİVERSİTESİ
2	ADIYAMAN ÜNİVERSİTESİ
3	BARTIN ÜNİVERSİTESİ
4	BİNGÖL ÜNİVERSİTESİ
5	DÜZCE ÜNİVERSİTESİ
6	OSMANİYE KORKUT ATA ÜNİVERSİTESİ
7	OZYEGİN ÜNİVERSİTESİ
8	ULUDAG ÜNİVERSİTESİ
9	VAN ÜNİVERSİTESİ

**FORMAL LETTER SEND TO UADMK MEMBER UNIVERSITIES
IN SECOND ROUND**

ULUSAL AÇIK DERS MALZEMELERİ KONSORSİYUMU

Sayı: B.02.TBA.0.12-107.04/3192   06/11/2009

Konu: Öğretim Elemanları'nın Ders Kaynaklarının Paylaşılması ile İlgili Görüşleri

Sayın Prof.
ÜNİVERSİTESİ REKTÖRÜ

Daha önce 14/07/2009 tarihli, B.02.TBA.0.12-107.04/2020 sayılı, üniversitenize göndermiş olduğumuz yazımızda da belirttiğimiz üzere, Türkiye Bilimler Akademisi (TÜBA) öncülüğünde, üniversitenizin de üyesi olduğu Ulusal Açık Ders Malzemeleri Konsorsiyumu (UADMK) projesi yürütülmektedir. Bu kapsamda, ilgili projenin başarılı bir şekilde hayata geçirilmesi için **öğretim elemanlarımızın ders kaynaklarının paylaşılması** ile ilgili görüş ve eğilimlerinin belirlenmesi büyük önem arz etmektedir. Bu konuda, yukarıda tarih ve sayısı belirtilen yazımız ile üniversitenizin öğretim elemanlarının araştırma çalışması kapsamında hazırlanan ankete görüşlerini bildirmeleri talep edilmişti. Ancak bu güne kadar toplanan veriler incelendiğinde, üniversitenizden bu araştırmaya yeterli katılımın olmadığı görülmüştür. Bu konudaki çalışmalarımızın devam ettiğini, üniversitenizde **ders veren tüm öğretim elemanlarının aşağıda İnternet adresi bulunan** elektronik ankete katılımlarının sağlanması konusunda desteğinize ihtiyaç duyduğumuzu tekrar hatırlatır, Ulusal Açık Ders Malzemeleri Projesi çalışmalarına sağladığınız katkılar için teşekkür ederiz.

Saygılarımla

Prof. Dr. Ali Ekrem ÖZKUL
UADMK Başkanı

İlgili ankete erişim için kullanılacak İnternet adresi:
http://acikders.org.tr/anket.htm
Ek: Öğretim elemanlarına dağıtabileceğiniz hazır duyuru metni

Duyuru Metni
Bu duyuru metninin digital kopyasına http://uadmk.ulakbim.gov.tr/duyuru.htm adresinden de ulaşabilirsiniz**:**

Değerli Öğretim Elemanlarımız
Ülkemizde Türkiye Bilimler Akademisi'nin (TÜBA) girişimiyle, Yüksek Öğretim Kurumu (YÖK) ve Türkiye Bilimsel ve Teknolojik Arastırmalar Kurumu (TÜBİTAK)'nun destekleriyle Mayıs 2007'de başlatılmıs olan Açık Ders Malzemeleri hareketi ile ilgili çalışmalar, **kurumumuz dahil** 48 üniversitenin temsil edildiği Ulusal Açık Ders Malzemeleri Konsorsiyumu (UADMK) öncülüğünde devam etmektedir.

Bu kapsamda, ilgili projenin başarılı bir şekilde hayata geçirilmesi için öğretim elemanlarımızın ders kaynaklarının paylaşılması ile ilgili görüş ve eğilimlerinin belirlenmesi büyük önem arz etmektedir. Bu konuda sürdürülen araştırma çalışması kapsamında hazırlanan elektronik ankete üniversitemizde **ders veren tüm öğretim elemanlarının** katılımları beklenmektedir. **10 dakika** sürmesi beklenen ankete aşağıdaki linkten ulaşabilirsiniz. Göstermiş olduğunuz ilgi için şimdiden teşekkür ederiz.

İlgili ankete erişim için kullanılacak İnternet adresi:
http://acikders.org.tr/anket.htm
Not: Linke tıkladığınızda anket açılmıyorsa, linki kopyaladıktan sonra internet tarayıcınızın (İnternet Explorer, Mozilla Firefox vb.) adres çubuğuna yapıştırıp ankete ulaşabilirsiniz.

APPENDIX P

LIST OF UADMK MEMBER UNIVERSITIES THAT SECOND
ANNOUNCEMENT WERE SENT

Table 6.3 List of UADMK member universities that second announcement were sent

No	University Name
1	ABANT İZZET BAYSAL ÜNİVERSİTESİ
2	ADNAN MENDERES ÜNİVERSİTESİ
3	ATATÜRK ÜNİVERSİTESİ
4	ATILIM ÜNİVERSİTESİ
5	BALIKESİR ÜNİVERSİTESİ
6	BAŞKENT ÜNİVERSİTESİ
7	BOĞAZİÇİ ÜNİVERSİTESİ
8	CUMHURİYET ÜNİVERSİTESİ
9	ÇANKAYA ÜNİVERSİTESİ
10	ÇUKUROVA ÜNİVERSİTESİ
11	DUMLUPINAR ÜNİVERSİTESİ
12	FIRAT ÜNİVERSİTESİ
13	GAZİ ÜNİVERSİTESİ
14	GAZİANTEP ÜNİVERSİTESİ
15	GAZİOSMANPAŞAÜNİVERSİTESİ
16	GEBZE YÜKSEK TEKNOLOJİ
17	HACETTEPE ÜNİVERSİTESİ
18	HARRAN ÜNİVERSİTESİ
19	İNÖNÜ ÜNİVERSİTESİ
20	İSTANBUL TİCARET ÜNİVERSİTESİ
21	İSTANBUL ÜNİVERSİTESİ
22	KADİR HAS ÜNİVERSİTESİ
23	KAHRAMANMARAŞ SÜTÇÜ İMAM ÜNİVERSİTESİ
24	KARADENİZ TEKNİK ÜNİVERSİTESİ
25	KIRIKKALE ÜNİVERSİTESİ
26	KOÇ ÜNİVERSİTESİ
27	MUSTAFA KEMAL ÜNİVERSİTESİ
28	NİĞDE ÜNİVERSİTESİ REKTÖRÜ
29	ORTA DOĞU TEKNİK ÜNİVERSİTESİ
30	SABANCI ÜNİVERSİTESİ
31	SELÇUK ÜNİVERSİTESİ
32	SÜLEYMAN DEMİREL ÜNİVERSİTESİ

33	TOBB EKONOMİ VE TEKNOLOJİ ÜNİVERSİTESİ
34	TRAKYA ÜNİVERSİTESİ
35	YEDİTEPE ÜNİVERSİTESİ
36	YILDIZ TEKNİK ÜNİVERSİTESİ

INTERVIEW PROTOCOL FOR THE PRACTITIONER OF OER INITIATIVES

Research Questions:

4. What do OER practitioners in three national initiatives experience during the implementation of OER project in their own institution?

    a. What were the challenges that have been confronted by practitioners during implementation of OER projects in three national initiatives?

        i. What were the main reasons behind for these challenges?

    b. What were the strategies that have been applied during the implementation of OER projects in three national initiatives?

_____

Görüşülen Kişi(ler)	**:** ……………………………………
Görüşmeyi Yapan	**:** ……………………………………
Tarih & Saat	**:** …...…/…...…/ 2010 & ...… : ….....
Görüşme Süresi	**:** ………………..............................
Görüşmenin Yapıldığı yer	**:** ………………..............................

Merhaba,

Adım Engin Kurşun, ODTÜ Bilgisayar ve Öğretim Teknolojileri Eğitimi Lisansüstü Programı'nda hem araştırma görevlisiyim hem de doktora öğrenimimi sürdürüyorum. Bu çalışmanın amacı Açık Ders Malzemeleri projesini uygulamaya geçiren üniversitelerin bu süreçteki deneyimlerini ortaya çıkarmaktır.

Öncelikle bu çalışmamda görüşlerinizi benimle paylaşmayı kabul ettiğiniz için teşekkür ediyorum. Bu konudaki kişisel deneyimleriniz, görüş ve düşünceleriniz

araştırmam için büyük önem taşımaktadır. Başlamadan önce bazı noktaları vurgulamak istiyorum. Yapacağımız görüşme sadece araştırma amaçlı kullanılacaktır. Bu çalışma sonucunda oluşturulacak dokümanlarda isminiz doğrudan ya da dolaylı olarak kullanılmayacaktır. Araştırma tamamlandıktan sonra ilgili analiz, sonuç ve tavsiyelerimizi eğer isterseniz sizlerle paylaşabiliriz. İzin verirseniz görüşmeyi kaydetmek istiyorum. Sizce sakıncası var mı? Sormak istediğiniz bir soru var mı?

Görüşme Soruları

1. Üniversitenizde Açık Ders Malzemeleri projesi ne zaman başladı?

2. Bu projedeki rolünüz nedir? Kısaca açıklayabilir misiniz?

3. Neden böyle bir projeyi başlatma ihtiyacı duydunuz?

   o İtici etmenler nelerdi?

4. Üniversitenizdeki ADM projenizin genel olarak yapısından bahsedermisiniz?

   o İşleyiş nasıl? Kimler çalışıyor? Kendini nasıl finanse ediyor?

5. Bu proje boyunca ne tür zorluklar/güçlüklerle karşılaştınız? Bunların üstesinden nasıl geldiniz?
   o Öğretim üyelerinin bu süreçteki tutumları nasıldı?
   o Üniversite yönetiminin tutumu nasıldı?
   o Bu süreçte unutamadığınız ilginç bir durumla karşılaştınız mı?

6. ADM projesini daha iyi hale getirmek için herhangi bir strateji uyguladınız mı? Uyguladıysanız? Ne tür stratejiler uyguladınız? Bunlardan hangileri çalıştı? Hangileri çalışmadı? Neden?
   o Akademik yükseltmeler için puan verilmesi?

7. Böyle bir projenin başarısını etkileyen en önemli etmenler nelerdir sizce?
   o Teknik altyapı
   o İletişim kanalları

8. Bu projeye yeni başlıyor olsaydınız, şuanki yapıdan farklı birşey yapar mıydınız? Neden?

9. Yeni başlayacaklara önerileriniz neler olurdu?

10. İleriye yönelik planlarınız nelerdir?

11. Bunların dışında sizin ayrıca eklemek istediğiniz bir husus var mı?

APPENDIX R

INFORMED CONSENT FORM FOR SECOND PART OF STUDY

Gönüllü Katılım Formu

Adım Engin Kurşun, ODTÜ Bilgisayar ve Öğretim Teknolojileri Eğitimi Lisansüstü Programı'nda hem araştırma görevlisiyim hem de doktora öğrenimimi sürdürüyorum. Bu çalışmanın amacı Açık Ders Malzemeleri projesini uygulamaya geçiren üniversitelerin bu süreçteki deneyimlerini ortaya çıkarmaktır. Vermiş olduğunuz cevaplar tamamıyla gizli tutulacak ve elde edilecek bilgiler sadece bilimsel yayımlarda kullanılacaktır. Bu hususta sahip olduğunuz deneyiminizi ve bilgi birikiminizi paylaşmanız bu süreçten sonra hazırlamayı planladığımız anketin şekillenmesi konusunda büyük katlı sağlayacaktır.

Çalışmaya katılım tamamıyla gönüllülük temelindedir. Görüşme, genel olarak kişisel rahatsızlık verecek soruları içermemektedir. Görüşmenin ortalama 30-45 dakika sürmesini beklemekteyim. Mülakat boyunca eğer izniniz olursa ses kayıt cihazı kullanmak istiyorum. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakabilirsiniz. Ayrıca, istediğiniz zaman ses kayıt cihazını durdurabilir ya da istediğiniz bölümleri mülakat sonrası silebiliriz. Bu çalışma sonucunda oluşturulacak dokümanlarda isminiz doğrudan ya da dolaylı olarak kullanılmayacaktır. Çalışma hakkında daha fazla bilgi almak için Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü araştırma görevlisi Engin Kurşun (ekursun@metu.edu.tr) ya da öğretim üyesi Doç. Dr. Kürşat Çağıltay'dan (kursat@metu.edu.tr) bilgi alabilirsiniz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı

yayımlarda kullanılmasını kabul ediyorum. (Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

İsim Soyad   Tarih   İmza

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APPENDIX S

COURSES TRANSLATED DURING THE FIRST YEAR (2010) OF THE TÜBA OCW PILOT PROJECT (TÜBA, 2011a)

Table 6.4 Courses translated during the first year (2010) of the TÜBA OCW pilot project

No	Course Title	Discipline	Translator(s)	University
1	Linear Algebra (MIT)	MATHEMATICS	Assoc. Prof. Mehmet Ünal	Bahcesehir University
2	Functions of Complex Variables (MIT)		Prof. Dr. Yusuf Avcı and Dr. Faruk Uçar	Istanbul University, Marmara University
3	Algebra I (MIT)		Prof. Dr. Muhammed Uludağ	Galatasaray University
4	Algebra II (MIT)		Assoc. Prof. Sefa Feza Arslan	Middle East Technical University
5	Introduction to Functional Analysis (MIT)		Prof. Dr. Şafak Alpay and Prof. Dr. Zafer Ercan	Middle East Technical University
6	Honors Differential Equations (MIT)		Prof. Dr. Ağacık Zafer ve Prof. Dr. Aydın Tiryaki	Middle East Technical University, Gazi University
7	Physics I (MIT)	PHYSICS	Assoc. Prof. Seydi Doğan	Atatürk University
8	Physics II (MIT)		Prof. Dr. Rıdvan Durak	Atatürk University
9	Quantum Physıcs I (MIT)		Prof. Dr. Selami Kılıçkaya	Osman Gazi University
10	Statistical Physics I (MIT)		Assoc. Prof. Tuğrul Senger	Izmir Institute of Technology

11	Statistical Physics II (MIT)		Assoc. Prof. Altuğ Özpineci	Middle East Technical University
12	Quantum Mechanics		Assoc. Prof. Ersen Mete	Balıkesir University
13	Petrology (MIT)	**GEOLOGY**	Assist. Prof. Sibel Tatar Erkül	Akdeniz University
14	Structural Geology (MIT)		Dr. Fuat Erkül	Akdeniz University
15	Surface Procesess and Landscape Evolution (MIT)		Prof. Dr. Orhan Tatar	Cumhuriyet University
16	Physics and Chemistry of the Terrestrial Planets (MIT)		Assoc. Prof. Gültekin Topuz	Istanbul Technical University
17	Fundamentals of Ecology (MIT)	**BIOLOGY**	Prof. Dr. Selim Sualp Çağlar	Hacettepe University
18	Physical Chemistry (MIT)	**CHEMISTRY**	Prof. Dr. Nursel Pekel Bayramgil	Hacettepe University
19	Physical Chemistry II (MIT)		Prof. Dr. Serap Şenel	Hacettepe University
20	Principles of Chemical Science		Prof. Dr. Nurcan Karacan	Gazi University
21	Thermodynamics and Kinetics		Prof. Dr. Mehmet Levent Aksu	Gazi University

**ORIGINAL COURSES DEVELOPED IN THE FIRST YEAR (2010)
OF THE TÜBA OCW PROJECT (TÜBA, 2011a)**

Table 6.5 Original courses developed in the first year (2010) of the TÜBA OCW project

No	Course Title	Discipline	Developer(s)	University
1	Introduction to Algebra (Soyut Cebire Giriş)	MATHEMATICS	Prof. Dr. Halil İbrahim Karakaş	Baskent University
2	Axiomatic Set Theory 1 (Aksiyomatik Kümeler Kuramı 1)		Prof. Dr. Ali Nesin	Bilgi University
3	Axiomatic Set Theory 2 (Aksiyomatik Kümeler Kuramı 2)		Prof. Dr. Ali Nesin	Bilgi University
4	Construction of Number Systems 1 (Sayıların İnşası 1)		Prof. Dr. Ali Nesin	Bilgi University
5	Construction of Number Systems 2 (Sayıların İnşası 2)		Prof. Dr. Ali Nesin	Bilgi University
6	Foundational Analysis 1 (Temel Analiz 1)		Prof. Dr. Ali Nesin	Bilgi University
7	Foundational Analysis 2 (Temel Analiz 2)		Prof. Dr. Ali Nesin	Bilgi University
8	Algebra (Soyut Matematik Dersleri)		Prof. Dr. Timur Karaçay	Baskent University
9	Topology (Topoloji)		Prof. Dr. Timur Karaçay	Baskent University
10	Introduction to Geographic Information Systems (Coğrafi Bilgi Sistemlerine Giriş)	GEOLOGY	Assoc. Dr. Şebnem Düzgün	Middle East Technical University
11	Remote Sensing (Uzaktan Algılama)		Assoc. Dr. Şebnem Düzgün	Middle East Technical University

EDUCATION

- **August, 2009- February, 2010:** Visiting Research Fellow, Institute of Educational Technology, the Open University, Walton Hall, Milton Keynes, MK7 6AA, United Kingdom. Advisors: Patrick McAndrew, Dr. , Tina Wilson, Dr.

- **2004, January- Present:** Ph.D. on B.Sc. Department of Computer Education and Instructional Technology, Faculty of Education, Middle East Technical University, Ankara. Dissertation Title: Open Educational Resources Movement in Turkish Tertiary Education: Developing a Policy Framework

- **2003 – 2004:** English Preparation School, School of Foreign Languages, Department of Basic English Middle East technical University, Ankara

- **1999 – 2003:** B.Sc. (Hons) Computer Education and Instructional Technology (1st Class Honours), Ataturk University , Erzurum

WORK EXPERIENCE

- **August, 2009- February, 2010:** Research Fellow, Open Learning Network Project (OLnet), United Kingdom, The Open University, Walton Hall, Milton Keynes, MK7 6AA, United Kingdom http://olnet.org/

- **2003 – Present:** Research Assistant, Computer Education and Instructional Technology, METU

- **2007 - 2008:** Technical Supporter at Computer Education and Instructional Technology, METU

- **September, 2003 – December, 2003:** Information Technology Teacher, Yavuz Selim Primary School, Erzurum.

RESEARCH PROJECTS & GROUPS

- **June, 2010- Present:** User Friendly Interface Design in Trainer Console Software in Cooperation with METU-MODSIMMER and HAVELSAN, www.modsim.metu.edu.tr

- **November, 2009- Present:** ENGAGE Learning, www.engagelearning.eu

- **August, 2009- Present:** EU Kids Online II, http://www.eukidsonline.metu.edu.tr

http://www.lse.ac.uk/collections/EUKidsOnline/Default.htm

- **December, 2008 – Present:** Simulation and Game in Education Research Group, http://www.simge.metu.edu.tr/

- **May, 2006 – Present:** Human Computer Interaction Research Group, http://www.hci.metu.edu.tr/

- **March, 2004 – May, 2006:** Distance Education Study Group, METU Turkey Alumni Association

TEACHING EXPERIENCE

- **Spring Semester, 2010-2011:** Assistantship, (CEIT 225), Instructional Design, CEIT, METU.

- **Spring Semester, 2010- 2011:** Assistantship, (CEIT 436), Project Development and Management II, CEIT, METU.

- **Spring Semester, 2010-2011**: Assistantship, (CEIT 708), Technology Enhanced Learning, CEIT, METU.

- **Fall Semester, 2010- 2011:** Assistantship, (CEIT 313), Operating System, CEIT, METU.

- **Fall Semester, 2010- 2011:** Assistantship, (CEIT 435), Project Development and Management I, CEIT, METU.

- **Spring Semester, 2009- 2010:** Assistantship, (CEIT 436), Project Development and Management II, CEIT, METU.

- **Fall Semester, 2009-Present:** Assistantship, (CEIT 323), Multimedia Design & Development, CEIT, METU.

- **Spring Semester, 2009-2010**: Assistantship, (CEIT 708), Technology Enhanced Learning, CEIT, METU.

- **Spring Semester, 2008-2009:** Assistantship, (CEIT 627), Advanced Readings II in Instructional Design and Technology, CEIT, METU.

- **Fall Semester, 2005 -2009:** Assistantship, (CEIT 317), Instructional Technology & Material Development, CEIT, METU.

- **Fall Semester, 2006 – 2007:** Assistantship, (CEIT 219), Design and Use of Instructional Material, CEIT, METU.

- **Fall Semester, 2007-2008:** Assistantship, (CEIT213), Computer Hardware, CEIT, METU.

- **Spring Semester, 2005 -2009:** Assistantship, (CEIT 420), Design, Development & Evaluation of Educational Software, CEIT, METU.

- **Fall Semester, 2004 – 2005:** Assistantship, (CEIT 210), Programming Languages I, CEIT, METU.

SCHOLARSHIP

- **2010, August:** The Scientific and Technological Research Council of Turkey (TÜBİTAK), International Conference Participation Fellowship awarded to attend 2010 AECT International Convention, Cyber Change: Learning In Our Connected World.

- **2010,** The Scientific and Technological Research Council of Turkey (TÜBİTAK) - UBYT International Scientific Publication in Social Sciences Award.

- **2005-2009:** The Scientific and Technological Research Council of Turkey, National Doctoral Student Scholarship, 2214, http://www.tubitak.gov.tr/home.do?ot=1&sid=523&pid=453

- **1999-2003:** Ministry of Education Scholarship for Prospective Teacher.

SERVICES

- **2010 - Present:** Reviewer - Association for Educational Communications and Technology, 2010 Conference Proposals

GIVEN WORKSHOPS

- Cagiltay, **K.,Kursun,** E. & Karakus, T., (planned). Workshop: Using Computer Games in Education, 5th International Computer & Instructional Technologies Symposium, Elazig, Turkey, 22-24 September, 2011

- Cagiltay, K., Karakus, T., **Kursun, E.** (2010). ENGAGE Game Based Learning. Full Day workshop to be delivered at Near East Technical University, Faculty of Education, Ankara, Turkey, December 17, 2010

- Cagiltay, **K.,Kursun,** E. & Karakus, T., (2010). Workshop: Using Computer Games in Education, 4th International Computer & Instructional Technologies Symposium, Konya, Turkey, 24-26 September, 2010

- Cagiltay, K., Karakus, T., **Kursun, E.** (2010). ENGAGE Game Based Learning. Full Day workshop to be delivered at Middle East Technical University, Faculty of Education, Ankara, Turkey, February 26, 2010

SKILLS

- Web Design: Dreamweaver, FrontPage
- Image Editing: Adobe Photoshop, Macromedia Fireworks
- Animation: Adobe Flash, Adobe Captivate
- Video Editing: Pinnacle Studio 8, Adobe Premier
- Game Development: Active Worlds, Torque Game Development

- Package Program: MS Office

- Programming Language: Action Script 2, ASP

- Statistical Analysis: SPSS 11-15

- Human Computer Interaction: Clearview Gaze Analysis Software

- CMS/LMS Management: Moddle, Drupal, Joomla

PUBLICATIONS

A. INTERNATIONAL

Report

- Cagiltay, K & **Kursun, E.** (In press). Open Educational Resources in Turkey: State-of-the-Art, Challenges and Prospects for Development. UNESCO IIET publication

Journal Paper

- Ozcelik, E., Karakus, T., **Kursun, E.** & Cagiltay, K. (2009). An Eye Tracking Study of How Color-Coding Affects Multimedia Learning, *Computers & Education*

- Erdoğan, M., **Kursun, E.**, Şisman, G.T., Saltan, F., Gök, A. & Yıldız, İ. (2010). Sınıf yönetimi ve sınıf içi disiplin problemleri, nedenleri ve çözüm önerileri üzerine nitel bir araştırma: Bilişim teknojileri dersi örneği. Kuramdan Uygulamaya Eğitim Bilimleri – Educational Sciences: Theory & Practice, 10 (2), 853-891.

Conference Paper

- **Kursun, E.,** & Cagiltay K. (2011) Open Educational Resources: Opportunities and Challenges for Turkish Higher Educational Institutions. The International Higher Education Congress: New Trends and Issues. Istanbul, Turkey. http://uyk2011.yok.gov.tr/

- Gedik, T., N., **Kursun, E.,** Karademirci, H., A**.** & Cagiltay, K. (2010). Potentials of Mobile Learning for High School Students: A Case with 11th Graders. International Open and Distance Learning (IODL) Syposium. Eskisehir, Turkey, October 6-8, 2010.

- **Kursun, E.,** Wilson, T., Cagiltay, K, McAndrew, P. (2010). Evaluating Three Different Open Educational Resource Models Provided to Enable Learning in Our Connected World. Paper presented at the AECT International Convention, Anaheim, CA, 27, 10, 2010, p.73

- **Kursun, E.,** Wilson, T., Cagiltay, K, McAndrew, P. (2010). Evaluating the current status of OpenCourseWare in Turkish Tertiary Education: benefits, barriers and incentives. Open Educational Resources 2010 (OER10), 22-24 March 2010, Cambridge.p.14

- Karakus, T., **Kursun, E.** & Cagiltay, K. (2010). The Findings of the EU

Project Intended for Game Base Learning and Educational Games Workshop, Abstract in the Proceedings of 4th International Computer & Instructional Technologies Symposium, Konya, Turkey, 24-26 September, 2010, p.606.

- Kozinska, K., **Kursun, E.,** Wilson, T., McAndrew, P., Scanlon, E., Jones, A., Cagiltay, K. (2010) Are Open Educational Resources the future of e-learning? In Gulsecen, S., Ayvaz Reis, Z. (Eds.) Future-Learning 2010. Third International Conference on Innovations in Learning for the Future 2010: e-Learning. Proceedings. Istanbul Kultur University Publication No: 125, p.34 – 44.

- Karaman, S., Yıldırım, S., & **Kursun, E.** Pre-Service Teachers' Views About Case-Based Learning Packages Related With Teaching Profession. International Educational Technology Conference. Ankara, Turkey, May 6-8, 2009.

- **Kursun, E.** & Cagiltay, K. (2009). Why Instructors are Sharing their Course Materials? Experiences and Perceptions. In I. Gibson et al. (Eds.), Proceedings of Society for Information Technology & Teacher Education International Conference 2009, Chesapeake, VA: AACE., pp. 1941-1946.

- Karaman, S., **Kursun, E.,** & Karakus, T. Web-based Course Design Preferences of Pre-service Chemistry Teachers with Learning Objects. Soceity for Information Technology & Teacher Education. Charleston, South Carolina - March 2 - 6, 2009, pp.398-405.

- Yildiz, I., **Kursun, E.,** Saltan, F., Gok, A., & Karaaslan, H. (2009) Using Wiki in a Collaborative Group Project: Experiences from a Distance Education Course. Soceity for Information Technology & Teacher Education. Charleston, South Carolina - March 2 - 6, 2009.

- **Kursun, E.,** Yildiz, I. & Sumuer, E. Öğretim Tasarımcısı: An Electronic Performance Support System for Teachers in Instruction Design Process. World Conference on Educational Multimedia, Hypermedia and Telecommunications. Vancouver, Canada, June 25 - 29, 2007.

- Yildiz, I, Karakus, T., **Kursun, E.,** Uzun, E. & Karaaslan, H. Random Assigned Collaborative Working in A Distance Education Course: Experience and Recommendations Of Students. World Conference on Educational Multimedia, Hypermedia and Telecommunications. Vancouver, Canada, June 25 - 29, 2007.

- Ozcelik, E., Karakus, T**., Kursun, E.,** & Cagiltay K. Color Coding Effect on Multimedia Learning and Visual Search: An eyetracking approach. The American Educational Research Association (AERA). Chicago, USA. April 9-13, 2007.

- **Kursun,E.,** Cagiltay, K.(2007). An examination of two types of timeline, linear vs. staggered: a mixed method approach. In 3rd Technology-Enhanced Learning Enlargement Workshop: Young researchers for the European future, Bulgaria, September 19-29, 2007

- Sumuer, E., **Kursun, E.** & Cagiltay, K. Current Major Competencies for Instructional Design and Technology Professionals. World Conference on

Educational Multimedia, Hypermedia and Telecommunications (pp. 1617-1622). Orlando, USA, 2006.

- **Kursun, E.,** Bakar, A., Gurer, D. M. Modeling Technology Use in Teacher Training Programs: A Case of a Faculty of Education. International Open and Distance Learning (IODL) Syposium. Eskisehir, Turkey, 13 -15 October, 2006.

- Karakus, T., Adıyaman, Z., Askun, C., S., Baran, B., Bayir G., Demirel F., **Kursun, E.,** Uzun, E., Uzun S., Yalcinalp, S. (2006) What people in Turkey think about e-Learning? Their awarness and preferences. International Open and Distance Learning (IODL) Syposium. Eskisehir, Turkey, 13 -15 October, 2006. Page: 585-597

B. NATIONAL

Book

- Askun, C. S., Baran, B., Karakus, T., **Kursun, E.,** Adiyaman, Z., Bayır, O. G., Demirel, F., Uzun, E., Uzun S., Yalcinalp, S. (2007) Eğitimin Değişen Yüzü E-Öğrenme. Orta Doğu Teknik Üniversitesi Mezunlar Derneği, ISBN:978-975-6085- 01-1, Ankara, Turkey.

Conference Paper

- Cagiltay, K., Ogan, C., Kasikci, D., Karakus, T., & **Kursun, E.,** (2010). Avrupa Çevrimiçi Çocuklar II (Eu Kids Online II) Projesi Türkiye Bulgulari. XV. Türkiye'de İnternet Konferansı, 02-04, December, 2010, İstanbul Teknik Üniversitesi, Ayazağa, İstanbul. (Abstact)

- **Kursun, E.,** & Cagiltay K. (2009). Açık Eğitim Kaynakları: Açık Kaynak Felsefesinin Eğitime Yansıması. Akademik Bilisim, 2009, Şanlıurfa, Türkiye. (Abstact)

- **Kursun, E.,** & Cagiltay K. (2008). Açık Ders Malzemeleri'nin Faydaları, Uygulanması Sırasında Karşılaşılabilecek Engeller ve Çözüm Önerileri Üzerine Bir Ön Çalışma. Akademik Bilisim Bildiriler Kitapcigi, 30 January-1 February 2008, Çanakkale, Türkiye, pp.311-317

- Uzun, E., Karakuş, T., **Kursun, E.,** & Karaaslan H. (2007). Öğrenci Gözüyle Aşırma (İntihal): Neden ve Çözüm Önerileri. Akademik Bilisim, 2007 Bildiriler Kitapçığı, 31 January -2 February, 2007, Kütahya, Türkiye.

- Ozcelik, E., **Kursun, E.,** & Cagiltay K. (2006). Göz Harekettlerini İzleme Yöntemiyle Üniversite Web Sayfalarının İncelenmesi. Akademik Bilisim 2006 Bildiriler Kitapcigi, 9-11 February 2006, Denizli, Türkiye.

- **Kursun, E.,** Karakus, T. (2005). Uzaktan Eğitimde Akıllı Sınıf Uygulamaları: ODTÜ Akıllı Sınıf Örneği, 5. Uluslararası Eğitim Teknolojileri Konferansı, Sakarya, Türkiye, 21-23 September, 2005.