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Turkish Mentors' Perception of Roles, Competencies and Resources for Online Teaching

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ABSTRACT

Developments in computer-mediated communications are not only providing new opportunities for educators but also changing roles and competencies in learning and teaching environments. Experts agree that teaching online requires different roles and competencies. The literature includes several studies on roles and competencies for online teaching. However, as Le Boterf underlines, roles and competencies largely depend on context. This survey study intends to identify roles, competencies and resources for online teaching in Turkey by asking online mentors of Anadolu University what they think about the roles they should perform and the competencies and resources they should possess in order to teach online successfully. Results have shown that the participant Turkish online mentors agree on the significance of the assessor, the content expert and process facilitator roles; on the other hand, they indicate lower level of necessity for the material producer and the administrator roles. Results have also revealed lack of design competencies among online mentors. Overall, the study has supported Le Boterf's claim about importance of context on identification of roles and competencies.

Keywords: Online Teaching, Roles, Competencies, Mentors, Online Learning in Turkey

INTRODUCTION

Teacher presence in online learning is more critical, complex and challenging than traditional educational environments due to characteristics of the technology (Rudestam & Schoenholtz-Read, 2002; Spector & de la Teja, 2001; Wolfe, 2000). Online teachers have to overcome potential barriers caused by technology, time, and place. Meanwhile, they have to make decisions among the expanded choices and opportunities that online tools provide them for creating effective, efficient and appealing learning environments. Thus, online teaching requires different roles and competencies than classroom teaching (Moore *et al*, 2001; Prestera & Moller 2001; Spector & de la Teja, 2001; Williams, 2003).

There have been efforts for identification and verification of online teaching roles and competencies. Much of these efforts concentrated on moderating and facilitating asynchronous and/or synchronous discussions (eg, Collison *et al*, 2000; Kearsely, 2000; Lim & Cheah, 2003; Maor, 2003). Others, generally, took student support into consideration and built the roles and competencies for online teaching in the light of this perspective (eg, Anderson *et al*, 2001; Berge, 1995; Paulsen, 1995; Salmon, 2000).

One of the earlier works on online teachers' roles and competencies by Berge (1995) draws a clear framework. Berge's work is one of those that focused on moderating. He suggests that there are many necessary conditions for successful online teaching and these conditions can be categorized into four areas: pedagogical, social, managerial, and technical. The *pedagogical* role is related directly with the teaching and facilitating activities, and includes use of questions and probes for students' responses that focus on discussions of critical concepts, principles and skills. The *social* role is about creating a friendly, social environment in which learning is promoted. The *managerial* role tends to be an organizational one that involves managing the interactions with strong leadership and direction. The *technical* role is associated with making learners familiar with the communication tools so that they can concentrate on academic tasks. Berge also makes recommendations related to each role that can be considered as a competence for successful online

teaching, such as, encouraging participation, maintaining a non-authoritarian style, guarding against fear in the computer-mediated communications (CMC), facilitating interactivity, reinforcing and modelling good "discussant behaviours", encouraging informality, being patient, providing swift feedback to technical problems, developing a study guide, and so forth.

Another effort has also presented quite detailed roles for online teachers (Goodyear *et al*, 2001). In June 2000, a group of researchers and practitioners from the United States, the United Kingdom, and other European countries came together in a workshop to discuss and explore different aspects of online learning and teaching. The outcome of this gathering resulted in listing a set of roles for online teachers and competencies associated with these roles. The roles identified at this workshop were:

- **process facilitator,**
- **adviser/counsellor,**
- **assessor**
- **researcher,**
- **content facilitator,**
- **technologist,**
- **designer, and**
- **manager/administrator.**

The *process facilitator* role is expected to facilitate the range of online activities that are supportive of student learning. The *adviser/counsellor* role requires working with learners on an individual or private basis, offering advice/counselling to learners to help them achieve the utmost benefit out of their engagement in a course. The *assessor* role is concerned with providing grades, feedback, validation of learners' work, and so forth. The *researcher* role is about engagement in production of new knowledge of relevance to the content areas being taught. The *content facilitator* role directly focuses on facilitating the learners' growing understanding of the course content. The *technologist* is concerned with making or helping make technological choices that improve the learning environment available to students. The *designer* role demands designing worthwhile online learning tasks prior implementations. The *manager/administrator* role is concerned with issues of learner registration, security, record keeping, and so forth.

The participant researchers and practitioners of this workshop have also determined competencies associated with these roles. For instance, challenging participants, supporting them both individually and as a group, summarizing key points in a discussion and guiding discussion in keeping with lesson goals and objectives are among some of the competencies related to the *process facilitator* role. Conversely, using online techniques to assess learning outcomes and processes, ensuring authenticity of student work, distributing grades and scores in keeping with legal statutes are among the competencies associated with the *assessor* role. At the same time, making use of online resources to collect information on online education, conducting research on online teaching and learning, developing theory or models are among the ones linked with the *researcher* role. Structuring content available to learners, monitoring progress, providing feedback are associated with the *content facilitator* role. Using technology at an operational level, diagnosing learners' technical issues and challenges, having knowledge about how the use of different media influence different types of tutor and student behaviour rest on the *technologist* role. Selecting appropriate media and modalities, providing for easy access to online resources and ensuring that the learning activities are consistent with the technology constraints and capabilities are some of the competencies associated with the *designer* role. Finally, interfacing with the institution (enrolling, assessment processes, evaluation, informing), referral of students to appropriate sources of support, enabling students to participate readily in the online environment are among competencies considered under the *manager/administrator* role.

The above efforts on roles and competencies of online teaching were just a few ones cited often. However, there have been more efforts in the literature (eg, Cyrus, 1997; Salmon, 2000, Spector & de la Teja, 2001; Thatch & Murphy, 1995). Many other organizations, institutions, practitioners or researchers have tried to describe roles and competencies for online teaching according to their experiences and point of view. This situation is supported by Le Boterf (1994) who claims that roles

and competencies largely depend on context and culture. In other words, roles and competencies identified at the end of a study or an experience may not be valid in different cultures, contexts, organizations, and countries. Studies (eg, Gunawardena, *et al,* 2001; Hedberg & Brown, 2001; Jelfs & Whitelock, 2000; Ku & Lohr, 2003; McIsaac, 2002; Van den Branden & Lambert, 1999) on the impact of culture in online learning have strengthened this claim.

On the other hand, experts stress that online education in Turkey is still in its infancy stages and there are only a few online degree/certificate programs although it is a necessity for Turkey rather than a convenience owing to shortage of higher education institutions and enormous demand for education. Every year almost 2 million people take centralized university entrance exam but only 20% of them can get in a traditional university. Anadolu University accepts almost the same percent of students into its distance programs (all programs are not online). This makes Anadolu University the largest distance learning provider in Turkey. Advance in computer networks have provided other Turkish Universities to launch distance learning initiatives. However, recent figures have shown that there are approximately 3000 learners taking part in online degree programs and around 1000 learners in individual courses offered by other universities in Turkey (Ozkul, 2004). One can easily infer that this number is almost nothing comparing to the demand for education in the country.

Status of online learning in corporate settings is quite similar to formal education. Although there is not any statistical data on the size of the market, some online learning providers such as Hakkı Sevand (cited in BTVizyon, 2002) and Zafer Küçükateş (cited in Telepati, 2003) think it is overall around $1 billion. According to Kavrakoglu (March 2002), the supply side of the online learning market is characterized by a few local players that have either some sort of collaboration with western (U.S. and European) training vendors or a solid background in providing face-to-face training and/or technology infrastructure. A few early adopters form the demand side of the market.

In a recent study, Aydin and Tasci (in press) investigated Turkish companies' readiness for online learning and found out that companies were ready in terms of many factors such as technology and resources, but they needed human resources who are qualified in design, development, implementation and evaluation of online learning activities. A same picture can be drawn for formal educational institutions. Although infrastructure and funding issues ground a significant challenge for these institutions, solutions are present and the institutions can easily adapt them. But, there is a challenge majority of the institutions may experience difficulties to cope with. It is the shortage of instructors with adequate experience in online teaching. An unpublished study has revealed that only 3 percent of the participant university instructors have had an online learning experience during their academic lives (Ozkul, et al., 2003).

Due to qualified instructor shortage and some other administrative issues such as intellectual property, Anadolu University uses mentors rather than instructors in its completely online degree program, the Information Management Program (IMP). It is an associate degree (two-year long) program that requires the use of online technologies in instruction processes. This program is also the first online undergraduate level degree program in Turkey. It aims to help students (1) gain the necessary skills to use required business software effectively and efficiently, (2) acquire the concepts and experience of Information Management in business, (3) attain the collaborative working experience and institutional communication through the Internet environment, and (4) acquire the necessary experience for the enterprise and management of the Internet environment.

The design of IMP is based on students' self-study and completion of weekly individual or team assignments. In other words, students are expected to use web-based instruction materials, videos on CDs and textbooks to study the content by themselves (all these materials except textbooks are produced in-house by the Computer-Based Instruction Centre of Anadolu University). Students are also required to complete weekly assignments either individually or in teams. During self-study and assignment completion, students can get pedagogical asynchronous and synchronous support from mentors.

There are 55 mentors, entitled "Academic Advisor", employed primarily for providing the pedagogical support in IMP. The main duties of these mentors include;

- **providing guidance to students when they are working on their assignments,**
- **answering their questions regarding assignments and topics, and**
- **assessing assignments.**

Besides, they are also expected to solve students' organizational or technical problems (if they can), and/or direct students to related support services. Mentors receive face-to-face training on content area, online teaching and program details prior to the terms. Additionally, each mentor works under the supervision of a course coordinator who helps and supervises mentors. Coordinators additionally assist to solve managerial and technical problems of students, arising from either themselves or mentors. Coordinators are also content experts responsible for production of the course materials (web-based materials and CDs that consist of videos).

Everyday at least one mentor for each course has to be online to help students. This means that students are able to interact with mentors synchronously for 8 hours (during work hours) daily, and 5 days in a week via online tools (chat). Course coordinators usually stay online and provide synchronous pedagogical and other types of support to students after work hours. For the synchronous support, mentors are asked to use computers at the Computer-Based Instruction Centre's (CBIC) labs rather than in their offices or homes, to make sure that at least one mentor for each course is available to help students. In effect, the majority of mentors willingly prefer to use the CBIC's computers, owing to the speed of internet connection, which is quite faster at the CBIC than in the offices and homes. In addition to synchronous support, students can have asynchronous interactions (email) with mentors and the coordinators whenever they prefer. Mentors and course coordinators are required to respond to students promptly. Moreover, sometimes students have access to mentors and course coordinators via the phone during work hours.

Beside mentors, there are staffs specifically employed for providing organizational and technical supports in IMP. This staffs uses online tools and the phone to help students. Everyday, students are able to receive 24 hours of technical support via asynchronous online tools and 16 hours via phone and synchronous online tools. Similarly, they can get 24 hours of organizational support via asynchronous online tools. Yet, they can reach the organizational support staff via phone and synchronous online tools during working hours available daily between 8:30am-6:00pm, 5 days a week. In addition to the distance support, students are free to make use of the administrative offices of Anadolu University that are located in 88 provinces all over the country. Staff in these offices can solve some of the organizational problems, such as ones related to registration, accessing course materials, dates and places of exams, and so forth.

An online environment called "Ders Arasi" (break time, as in schools) is provided for social interactions among students. In the Ders Arasi, students can come together and share their ideas, feelings and experiences with each other without any monitoring. Additionally, students can have these kinds of interactions with mentors and staff, as well as course coordinators and administrators during synchronous and asynchronous online communications. Besides, IMP gives web domain and space for students to build their own individual web sites. Students are also able to join the student clubs in Anadolu University and meet with their on-campus counterparts.

Although design of the IMP seems well functioning, it causes some problems as well. For example, in an informal conversation the IMP director mentioned that assessment of the assignments has became the main duty of the online mentors. One of the main reasons for this development was lack of incentives for interactions between the mentors and the students. The IMP was designed in a way that does not require this sort of interactions. If the students need to ask a question or discuss an issue, they are free to do so, but if it is not necessary they do not have to (on-demand support). Similarly, mentors were not required to establish interactions unless students requested. The IMP director stressed that although they promoted mentors for encouraging students to participate in interactions, they were not able to succeed. Therefore, the majority of mentors were only assessing students' assignments and reporting the results to the coordinators.

Additionally, in a previous study Ataizi and Caliskan (2003) examined these online mentors' incentives for taking part in the program. They found out that receiving financial benefits was one of the main incentives for these mentors. Mentors indicated that outside IMP they have heavy work

loads (e.g., working on their dissertations, teaching face to face classes, and so forth), and considered teaching in IMP as an additional job to supplement their income. This motive, as well as the design of the program, could have driven online mentors to focus on the assessment of assignments and spend as little as possible on other duties, or to establish interactions with the students.

Furthermore, the director of the program also stressed students' preference to interact with the course coordinators and other students, rather than their mentors. According to the director, one of the main reasons behind this preference could be the availability of other students, the administrators and the course coordinators for longer period of time in a day to communicate synchronously.

On the basis of the given context, this study was conducted to reveal how the mentors believe about the roles and competencies they should possess.

PURPOSE

The main goal of this study is to examine the Turkish online mentors' perception of roles, competencies and resources for successful online teaching. In other words, the study aims to identify roles, competencies and resources for online teaching in Turkey by asking mentors what they think of the roles they should perform, competencies and resources they should possess, in order to teach online successfully.

Therefore, the research questions of the study have been formulated as follows:

- **How do mentors perceive the roles for successful online teaching?**
- **How often do mentors perform these roles in online courses?**
- **How do mentors perceive competencies and resources for successful online teaching?**
- **To what extent do mentors think that they possess these competencies and resources?**
- **Do mentors' age and gender differentiate their perception of roles, competencies and resources for successful online teaching?**

METHODOLOGY

The data collection method used for this study was a survey designed to seek input from mentors. Following are the information about the participants and the survey instrument used in the study.

Participants

Mentors (55) employed in IMP of Anadolu University were asked to take part in this study. Only 2 of these mentors did not participate due to personal reasons. As a result, the study was conducted with the participation of 53 online mentors.

All the participants were working as graduate assistants or as faculties in various colleges of Anadolu University besides working as mentors in IMP. The majority of the participant mentors were graduate assistants (31 participants - 56.4%) while others (22 participants) were experienced lecturers who have been teaching undergraduate level courses for a certain number of years in different fields. It might be beneficial to give some details about graduate assistantship in Turkey for the audience. To start with, the graduate assistantship is a profession in Turkey. In other words, graduate assistants are employed as fulltime assistant faculties, whose main responsibilities are to assist professors in their courses and research studies, as well as helping in the administration of departments. Although it is not encouraged, sometimes graduate assistants also take responsibilities of undergraduate level courses owing to shortage of professors. A big majority of the participant graduate assistants (28 out of 31 – 90%) have been assisting professors for several years, and sometimes, they stand as substitutes in lectures. Therefore, they can be considered as experienced in face-to-face teaching. Moreover, of the participants, 11 (20%) were females, and most (45.5%) were between 25-29 years old.

Instrument

A survey questionnaire was selected as the main data collection method to seek input from the participant Turkish mentors. The instrument, entitled "Online Teaching Roles, Competencies and Resources Questionnaire" (OTRCRQ), was developed to gather data from the participant mentors. It included three parts. The first part aimed to learn about demographic characteristics of the participants such as age, gender, title, field of study, previous teaching and computer experience. The second part focused on the collection of data of the participants' perception of roles. The last part consisted of items related to the competencies and resources.

The second part of the OTRCRQ included items regarding the roles for online teaching. Having presented 8 roles and their brief descriptions to the participants, the researcher asked the online mentors to indicate:

- **how necessary they find each role to perform (their perception of necessity of performing each role), to ensure the success of online teaching; and,**
- **how often they are performing these roles in their online courses.**

Also, the participant online mentors were expected to add new roles other than those already listed. The listed roles, without one exception, were adapted from Goodyear and his colleagues' work (Goodyear et al, 2001): *content expert*, *process facilitator*, *instructional designer*, *adviser*, *technologist*, *assessor* and *administrator*. The *researcher* role in Goodyear and his colleagues' work was not used in the instrument because the researcher, by intuition and experiences found this role not significant for the IMP context. Instead, the *material producer* role was included in the list. This role was described as design and development of the online materials such as web pages, video, etc.

The researcher determined to use Likert format for measurement in the OTRCRQ. Likert scaling is one of the most often used format in measuring opinions, beliefs, and attitudes (DeVellis, 2003). Since the instrument was developed to seek the participants' beliefs about online teaching, Likert format can be considered as one of the effective measuring scales for this study.

In order to determine the competencies and resources, first, the researcher identified 5 factors for successful online teaching based on the literature, intuition and experiences:

- **technology,**
- **communication,**
- **time,**
- **online education, and**
- **content.**

These factors were quite similar to the Salmon's (2002) qualities of e-moderators: understanding of online process, technical skills, online communication skills, content expertise, and personal characteristics. In addition, competencies were considered into two categories as skills and attitudes. As a result, the factors, skills, attitudes and resources were placed in a table to create a framework to generate an item pool. These placements are illustrated in Table 1. The skills, attitudes and resources form the columns, and the factors establish the rows of the table. The numbers of the items included in the survey (given in parentheses), are also shown in the table.

Second, the researcher generated 78 items by using the table. These items regarding the competencies and resources were developed in a declarative sentence format with the purpose of being able to use the 5-point Likert scale for analysing the responses.
The OTRCRQ provided two sets of responses (two 5-point scales) for each competence and resource sentence.

The first set helped the participants to point out their responses about how they perceived the competencies and resources for successful online teaching (the third research question).

The second set served the participants to indicate their responses about the extent to which they think that they possess these competencies and resources (the fourth research question).

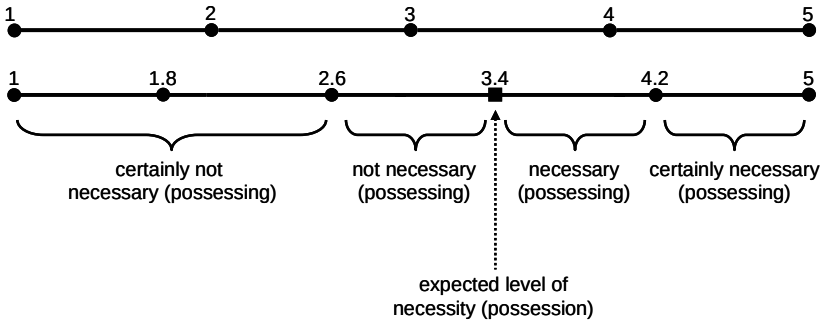
Table: 1
The factors related to competencies and resources for online teaching

Factors	Competencies		Resources
	Skills	Attitudes	
Technology	Ability to use technolo	Belief in use of technology (9	Have access to computers

	5, 6, 7, 8)		Internet (1, 2)
Communication	Ability to interact onlin 14, 15, 16)	Belief in open communication	Have access to communic tools (11, 12)
Time	Ability to manage time 23)	Belief in time management (2	Have enough time to desi implement (19, 20)
Online Education	Ability to teach online 30, 31, 32, 33, 34, 35, 38, 39, 40, 41, 42, 43)	Belief in effectiveness of onlir education in general (44, 45)	Have enough support for designing and implement 27)
Content	Ability to update conte expertise (48, 49, 50)	Belief in appropriateness of tl content for online teaching (5	Have enough resources fc content area (46, 47)

The 3.41 mean score was identified as the expected level of necessity and possession with each competence or resource, while other responses enabled the participants to show higher or lower levels of necessity and possession. The 3.41 mean average was determined after identifying the critical level: 4 intervals/5 categories = 0.8.

Figure: 1
Assessment method used for analyses of the responses



Third, the researcher had a group of online education experts and practitioners who have been teaching online in another online program of Anadolu University review the 78 items. Taking into consideration the experts' and practitioners' suggestions, 52 of the 78 items were selected to include into the instrument. In addition, adequate room provided the participants to indicate other competencies and resources that they thought were necessary for successful online teaching.

The researcher had two concerns regarding the instrument. The first concern was the number of items. The instrument required users to respond twice for each role (8x2=16), as well as for each competence and resource (52x2=104). Consequently, the instrument actually included 120 items, which was quite a big number to implement into a survey questionnaire that could influence the results. In order to overcome this problem, the researcher decided to give participants more time (a week) than required (2 hours), to complete. Another concern was about the proximity of the responses for each item. The instrument involved two sets of 5-point scales at the end of each descriptive item that represent a role, competence or resource.

The participants were asked to indicate their responses for their perception and possession of each item by using these scales. Since these scales were located side by side (next to each other), the participants' responses could have been influenced by this proximity. Yet, due to the number of items, the researcher decided to use the same format despite this concern.

Procedure and Data Analysis

The study was conducted in May 2003. The participant online mentors were asked to complete and return the paper-pencil based questionnaire in a week.

The researcher used descriptive statistics (means and standard deviation) in order to analyse the research questions 1-4 because the nature of the questions were to draw a picture of online mentors' perceptions, not to make comparisons. For the last question, t-tests and ANOVA analyses were employed.

RESULTS AND DISCUSSIONS

The reporting of results and discussion is organized into four sections. The first section discusses the reliability of the survey instrument. The second reports the results for research questions one and two. The third gives details of the results for research questions three and four. The fourth section consists of the results for the last research question.

Reliability of Analysis of the Survey Instrument

The following procedures were used to determine content and construct validity of the survey instrument:

- **review of the literature,**
- **three experts who have been conducting research on online learning and teaching, as well as teaching online, and**
- **the field test with the online mentors of another program (that has just started) of Anadolu University.**

According to Cronbach's Alpha analyses, the reliabilities for all sections of the survey were found to be quite high. The reliability of the participants' responses regarding their perception of roles (0.873) was higher than the reliability of the participants' frequency of playing these roles (0.829).

Also, the reliability of the section related to the participants' perception of competencies and resources (0.954) was observed as almost being the same as reliability of the section about the participants' extent of possessing these competencies and resources (0.950).

Online Mentors' Perception of Roles

Results of the first and second research questions regarding online teaching roles are illustrated in Table 2.

Table: 2
Participant online mentors' perception of roles and the extent of playing these roles in their courses

Roles	Perception of Roles			Extent of Playing Roles		
	CA	M	SD	CA	M	SD
Content Expert	0.873	4.08	1.07	0.829	1.77	1.22
Process Facilitator		4.11	1.05		2.62	1.29
Instructional Designe		3.91	1.11		1.70	1.17
Adviser/Counsellor		3.60	1.29		2.06	1.20
Technologist		3.85	1.25		2.74	1.36
Assessor		4.45	0.97		3.92	1.45
Material Producer		3.57	1.38		1.45	1.01
Administrator		3.28	1.69		1.51	1.10

The mean scores for the administrator, material producer and the assessor roles were quite attention grabbing. The mean score for the administrator role was found lower than expected level of necessity (3.28<3.41). To put it simply, most of the participants did not think or were not sure that online mentors should be dealing with administrative duties, such as registration, announcing the results of exams and record keeping. Consistently, the mean score (1.51) for the same role in the left side of the Table 2 revealed that a big number of the participants have never or seldom performed this role in their courses.

One of the other roles indicated among the ones that the participant online mentors never performed, was the material producer role. The results have shown that participant online mentors never take part in production of the materials (1.45), and that might be the reason of perceiving the material producer role (3.57) as being not essential as others. On the other hand, the mean score concerning the assessor role was found to be the highest (4.45). In other words, the participants perceived the assessor role as being very essential for successful online teaching.

This role was the only role that was always or often performed by a large number of the participants (3.92). By looking at these results, one can easily infer that the participant online mentors perceived the roles that they have been performing and have not fulfilled in their online courses, as the most and the least essential roles for successful online teaching.

However, the participant online mentors considered facilitating the learning process (4.11), being content expert (4.08), designing online courses (3.91), and providing technical support (3.85) as being the essential roles for successful online teaching, although they were not often performing these roles. As can be seen in Table 2, the participant online mentors indicated that they seldom perform the technologist and the process facilitator roles while they (almost) never perform the instructional designer and the content expert roles. On the other hand, the participants point out the adviser/counsellor role (3.60) as being not essential as the others, while participant mentors seldom performed this role in their courses.

On the other hand, the participants were able to point out roles other than the listed ones. However, they did not propose any new role.

Overall, as can be seen, although the participant mentors have not really been performing the roles indicated in the OTRCRQ, they perceived almost all the roles as being essential for implementing online teaching successfully.

The participants' experiences and the design of IMP have affected their perception of roles. It seems that the design of IMP created a context in which online mentors' roles focused on students' assignments.

In other words, they were expected to help students complete their assignments and to assess these assignments. The design of the program did not encourage any other interaction, especially teacher-student interaction.

Online Mentors' Perception and Possession of Competencies and Resources

The mean and standard deviation scores of each item concerning perceptions and possession of the participants are listed in Tables 3-8.

As can be observed from these tables, the participant online mentors perceived almost all the competencies and resources listed in the OTRCRQ as being very important to possess in order to be able to teach online successfully.

However, they reported low level of possessing some of the competencies and resources.

One of the interesting findings regarding technology factor (Table 3) is the participants' perception of home computer ownership.

The participants found having access to the Internet and a computer at home as not being essential as having access in the work place.

Since the literature sees access to resources as being very crucial, one can infer this finding as a barrier to the success of online teaching.

However, this result was quite related to the design of IMP and recent figures about computer ownership in Turkey. The program required online mentors to support students during the work hours from either their own offices or the CBIC Labs.

So, online mentors do not need to have an access to technological resources at home to teach online.

On the other hand, recent figures uncovered that only 3% of the whole population in Turkey has computers at home and only 7% of them have access to the Internet, although a steady increase has been observed (Aydin, 2001).

As illustrated in Table 3, home computer ownership ratio among the participant online mentors has mirrored the situation in the country.

Table: 3
The participants' perception and possession of competencies and resources related to the technology

Item	Skills, attitudes and resources to technology	Perception			Possession		
		CA	M	SD	CA	M	SD
	Skills: Ability to...						
3	use computers effectively (eg processing; creating tables ar graphs; drawing, opening, sav printing documents)	0.7743	4.811	0.395	0.7431	4.736	0.486
4	use Internet effectively (eg, s and receiving email, participa and listserv, conducting a res the web, publishing online)		4.792	0.454		4.642	0.558
5	create and publish multimedi audio, motion and/or still ima online		4.037	0.999		3.528	1.353
6	use online learning managem system (WebCT, Blackboard, chosen by the institution and it with other systems		3.981	0.909		2.849	1.350
7	provide support for students having technical problems		4.339	0.807		3.547	1.218
8	follow developments in online teaching technologies and ad technologies into the courses		4.434	0.655		3.076	1.452
	Attitudes:						
9	not hesitate to use te (especially computers) into da		4.736	0.655		4.698	0.540
10	be in favour of the id technology makes life easier		4.755	0.476		4.642	0.623
	Resources: Have access to...						
1	Internet and a computer enough capacity to be implement online teaching at		3.754	1.175		2.642	1.642
2	Internet and a computer enough capacity to be implement online teaching at		4.754	0.476		3.962	1.315

Additionally, as can be observed from Table 3, the participant online mentors stated lower level of possession for items regarding abilities of using online learning management systems (item 6) and of following developments in online teaching technologies (item 8). These results can be related to technology decisions of Anadolu University. Almost all technology adaptation decisions have been made by administrators, and the faculty had a few influence on these decisions.

This procedure was also good for the technologies used in IMP. Consequently, the participants might have never felt a need to use online learning management systems and follow the developments in online learning technologies.

Table: 4
The participants' perception and possession of competencies and resources related to the communication

Item	Skills, attitudes and resources rel communication	Perception			Possession		
		CA	M	SD	CA	M	SD
Skills: Ability to ...							
13	**express ideas, thoughts, and feelings in written form**	0.7283	4.566	0.572	0.7879	4.377	0.790
14	**organize messages concisely and clearly**		4.660	0.478		4.472	0.608
15	**use nonverbal communication elements (eg, emoticons) effectively**		3.830	1.069		3.698	1.249
16	**motivate and encourage students to complete planned activities**		4.340	0.706		3.547	0.889
Attitudes: Prefer to ...							
17	**use informal language during interactions with students**		4.207	0.863		4.151	0.744
18	**use email to send a message while other communication tools such as phone are also available**		3.774	0.912		3.623	1.004
Resources: Have access to ...							
11	**synchronous online communication technologies (chat, video conference)**		4.604	0.599		4.245	0.830
12	**asynchronous online communication technologies (email, listserv)**		4.717	0.533		4.528	0.696

Among the results demonstrated in Table 4, the one concerning preference of using email while other communication tools are also available is worth noticing. Although the participants' perception and possession levels are higher than expected, they regarded this attitude as not being as essential as others. This result can be related to cultural differences. Hall (1976) proposed that cultures can be classified as low or high context according to the amount of information that is stated directly, versus implied in a communication message. Low-context cultures depend on information provided by the precise code of the message itself.

On the other hand, high context cultures obtain meaning from the contextual clues delivered through indirect verbal messages to extrapolate meaning. Aydin and McIsaac (2004) stated that Turkish people usually prefer to hide their real feelings to avoid hurting those with whom they might disagree. Therefore, Turkish culture can be considered more of a high-context culture.

One of the disadvantages of written communication is lack of reflecting contextual clues. Thus, Turkish people in general prefer verbal communication than written ones. This might have led the participants to indicate a lower level of necessity for the item concerning preference of using email, a text-based communication tool, while alternatives, such as phone (a verbal tool) are also available.

Another interesting result is about motivating students. It seems that the participants have had problems in terms of motivating and encouraging students to complete planned activities. This result may be related to the general tendency of Turkish distance learners' study habits. Studies on distance learners in Turkey (eg, Alkan *et al*, 1997; Demiray, 1993) reveal that students tend to start studying just before the exams and prefer using study guides that consist of brief notes and test items, rather than course materials that require time and systematic study. The IMP director referred to the same type of tendency in personal conversation. He stated that the majority of the students are likely to wait to ask for help in completing their assignments until the last day.

As a result, they often request dateline extensions. During the conversation, the director of IMP indicated that after the first year they noticed that students were having difficulty to complete the

required weekly assignments. One of the main reasons of this problem was the heavy work loads of those students who work. The director stressed that the course designers were planning to lessen the number of weekly assignments.

Table: 5
The participants' perception and possession of competencies and resources related to the time

Item	Skills, attitudes and resource to time	Perception			Possession		
		CA	M	SD	CA	M	SD
	Skills: Ability to...						
21	leave enough time for instructional activities	0.7665	4.245	0.757	0.7355	3.491	1.031
22	complete planned activities in allocated time		4.491	0.542		4.057	0.908
23	manage time effectively		4.547	0.574		3.962	0.940
	Attitudes: Prefer...						
24	not to wait until the last minute to complete the planned tasks		4.679	0.471		4.094	0.883
25	to complete a task in allocate		4.774	0.423		4.340	0.831
	Resources: Have enough time to...						
19	design and develop instructional materials for online courses		4.000	0.961		2.793	1.321
20	implement online courses		4.377	0.686		3.642	1.021

As illustrated in Table 5, the participant online mentors perceived all skills, attitudes and resources related to time factor as being very important for successful online teaching. On the other hand, the participants emphasized lack of time for design and development of instructional materials for online courses.

This finding was consistent with the participants' responses about the material producer role. Online mentors' heavy work loads outside IMP, their beliefs about the production of the materials, their incentives for being an online teacher in the program and the director's attitudes about using online mentors in the production process could be the bases for this result.

Table: 6
The participants' perception and possession of competencies and resources related to the online education

Item	Skills, attitudes and resources related t education	Perception			Possession		
		CA	M	SD	CA	M	SD
Skills: Ability to...							
28	**design and implement online learning activities that promote collaboration among students**	0.9402	4.434	0.605	0.9315	3.019	1.083
29	**create an online learning environment that social interactions among students**		4.132	0.878		2.739	1.211
30	**see differences and similarities between online teaching and face-to-face teaching**		4.472	0.575		4.000	1.000
31	**decide whether or not online teaching is appropriate in encountered situations**		4.189	0.735		3.755	0.918
32	**design interesting and appealing online learning activities (eg, instructional games, questions) that facilitate achievement of the instructional goals and support active participation of students**		4.189	0.810		2.925	1.269
33	**prepare instructional materials that include read and/or comprehend verbal (type face, size) and visual (colour, arrangement) elements**		4.453	0.638		3.151	1.406
34	**provide enough feedback when and where needed**		4.528	0.608		3.925	1.089
35	**create a democratic environment in which student are able to communicate with each unreservedly on content related or other topics and feel no discrimination**		4.547	0.574		3.755	1.191
36	**play appropriate online teaching role in encountered situations**		4.510	0.576		4.057	0.770
37	**analyze students' needs and characteristics, take into consideration when designing instructional activities**		4.377	0.790		3.321	1.252
38	**direct students different resources (online or other)**		4.492	0.608		3.698	1.153
39	**keep up with new learning and teaching theories, approaches, and models**		4.538	0.608		3.396	1.230
40	**develop and administer appropriate online assessment tools and strategies**		4.472	0.668		3.208	1.406
41	**cope with problem students without loosing them**		4.491	0.775		3.509	1.265
42	**interfere the discussions among students at the right time and with appropriate appr**		4.528	0.575		3.887	1.235
43	**select appropriate instructional activities to available online technologies**		4.585	0.570		3.736	1.243
Attitudes: Belief in ...							

44	**effectiveness of using technology such as computers, video, overhead, and so forth on learning**	4.491	0.639	3.396	1.166
45	**learning can occur in online/distance learning environments as well as in face-to-settings**	4.736	0.445	4.453	0.722
Resources: Have ...					
26	**material support (eg, financial, technological) from his/her institution in order to be able design, develop and implement online education**	4.491	0.775	3.302	1.049
27	**moral support (eg, encouragement, motivation) from his/her institution in order to be able design, develop and implen online education**	4.321	0.936	3.283	1.045

In the same way as in the time factor, the participants found all skills, attitudes and resources related to online education very important for successful online teaching. Although some of items' mean scores were lower than "certainly necessary" level (4.2), the results concerning these items can also be interpreted as very essential, since the scores were very close to the 4.2 level, as illustrated in Table: 6.

However, it can be claimed that the participants have lack of instructional design skills on the bases of the responses for items 28, 29, 32, 33, 37 and 40. The participants scored lower for these items than the expected level (3.41). This result was consistent with the participants' responses concerning the extent of carrying out the designer role in online courses. As indicated before, the majority of the participants have never undertaken this role. In terms of attitudes, responses revealed that the participants were not sure about the effectiveness of technology on learning, although they believed in no difference phenomena. Similarly, the participants were not sure about whether or not they were getting enough material and moral support from the institution in order to be able to design, develop and implement online education. As a result of the conversation with the director, the researcher concluded that some of the participants were not happy about the money they were getting for teaching in IMP. Also, they lost their enthusiasm over the time; the program became monotonous and boring after a couple weeks and turned into a time consuming obligatory activity.

This finding may be associated with social presence theory. Experts (eg, Gunawardena & Zittle, 1997; Tu & McIsaac, 2002) point out that social presence is a strong predictor of satisfaction within a CMC environment, and students' perception of presence increases their participation. In the light of these explanations, mentors' social presence, as well as students in online programs can also be regarded as a significant factor for the success of the program. Accordingly, building a learning community among online mentors of IMP might not only help mentors' perception of social presence but also might increase their satisfaction from the program.

Furthermore, one of the interesting findings is related to item 29, "ability to create an online learning environment that promotes social interactions among students", which has the lowest score in this category. It appears that the IMP's design has also led to this result. The main duties of online mentors in the program did not include social support. As it has been mentioned before, the social support has been provided by means of an online environment, "Ders Arasi". This environment has been created for students and, as has been noticed during the informal interviews, the majority of online mentors have never heard of the availability of this environment.

On the other hand, the director of the program has stated that a few online mentors had social interactions with some students and even had the opportunity to meet face-to-face.

The director noted that as the director of the program he would have preferred not to allow this sort of meeting, due to ethical issues, such as student-teacher relationships. His view was that some students who meet or who see/notice other students meeting with the instructors, might use these meetings to influence their scores in the exams and the assignments.

With this in mind, the director cautioned mentors about these issues and asked them to invite all students to these meetings to avoid such problems.

Table: 7
The participants' perception and possession of competencies and resources related to the content

Item	Skills, attitudes and resources to content	Perception			Possession		
		CA	M	SD	CA	M	SD
	Skills: Ability to...						
48	act like an expert during the instruction	0.8621	4.736	0.445	0.8356	4.189	0.900
49	reach and follow up-to-date resources in his/her content area		4.642	0.484		4.208	0.717
50	work collaboratively with the other experts in his/her content area		4.623	0.489		4.226	0.670
	Attitudes: Belief in...						
51	sufficiency of content included in IMP program		4.566	0.605		3.981	0.820
52	appropriateness of the content for online education		4.528	0.668		3.981	0.720
	Resources: Have...						
46	enough support from other content experts		4.377	0.713		4.019	0.796
47	easy accesses to resources related to content area		4.717	0.455		3.981	1.028

As can be seen in Table 7, the participants found all skills, attitudes and resources related to time and online education and content factors very essential for successful online teaching.

In terms of their extent of possessing these competencies and resources, they did not have any problem. In other words, the participants thought that they possess these skills, attitudes, and resources.

Table 8
Overall descriptive statistics for each factor as well as skills, attitudes and resources

Factors		Competencies				Resources		Overall	
		Skills		Attitudes					
		Percep.	Possess.	Percep.	Possess.	Percep.	Possess.	Percep.	Possess.
Technology	M	4.399	3.730	4.745	4.670	4.255	3.302	4.440	3.832
	SD	0.480	0.769	0.466	0.470	0.705	1.261	0.426	0.624
Communication	M	4.349	4.024	3.991	3.887	4.660	4.387	4.337	4.080
	SD	0.520	0.660	0.654	0.698	0.526	0.670	0.436	0.553
Time	M	4.428	3.837	4.726	4.217	4.189	3.217	4.445	3.768
	SD	0.512	0.826	0.423	0.812	0.715	1.021	0.422	0.623
Online Education	M	4.433	3.505	4.613	3.925	4.406	3.293	4.448	3.526
	SD	0.476	0.828	0.487	0.736	0.809	0.943	0.465	0.757
Content	M	4.667	4.208	4.547	3.981	4.547	4.000	4.598	4.084
	SD	0.424	0.624	0.548	0.635	0.503	0.791	0.415	0.579
Overall	M	4.455	3.860	4.525	4.136	4.411	3.640	4.464	3.879
	SD	0.385	0.594	0.371	0.445	0.405	0.543	0.354	0.474

Table 8 consists of overall statistics concerning each factor as well as skills, attitudes and resources. On the bases of these figures, one can assume that the participant online mentors have agreed on the importance of the skills, attitudes and resources listed in the OTRCRQ for teaching online successfully. The participants also expressed that they possessed these skills at an adequate level. Nevertheless, they needed improvement related to some factors to be able to perform better in online teaching. For instance, it might be beneficial for IMP if online mentors get more training on online teaching skills, such as motivating distance students. Additionally, they can be supported with some resources particularly related to technology, time and online education factors.

As has been mentioned earlier in the methodology, the instrument allowed the participants to offer competencies and resources other than the listed ones. Similar to roles, the participants did not indicate any other competence or resource.

Effects of Age and Gender on Online Mentors' Perception and Possession of Roles, Competencies and Resources

The fifth research question examined whether or not the participants' age and gender have created difference in their perception of roles, competencies and resources. The t-test and ANOVA analyses have shown that age and gender had no effects on the participants' perception of roles, competencies and resources.

CONCLUSION

This study examined the Turkish online mentors' perception and possession of roles, competencies and resources for successful online teaching. First of all, results have supported Le Boterf's (1994) claim about dependence of roles and competencies on context. The participant mentors pointed out the roles, competencies and resources that they often play and possess as certainly necessary, and indicated the ones that they never performed or do not possess as not being essential as others. In other words, their experiences in the Information Management Program (IMP) of Anadolu University have influenced their perception of the necessity of roles, competencies and resources for successful online teaching.

Second, the study has shown that in a given context, Turkish mentors have perceived some roles, competencies and resources as being more essential than others. The assessor role, for example, was perceived as very important for teaching online successfully, mainly due to the design of IMP that does not necessarily require and promote any other roles for mentors, rather than assessing students' works. Most probably, this context of the program has led the participants to point out the assessor role as being very essential for online teaching. On the contrary, in this given context, Turkish mentors found the administrator role not essential for successful online teaching, although it was clearly indicated in the literature (eg Anderson & et al, 2001; Berge, 2000) that the administrator role is one of the essential roles of online teaching.

In terms of skills, it was interesting to observe that basic computer and internet skills, and acting like an expert were regarded as being the highest significance among all the skills. One can infer that content expertise was still considered as the most significant skill by Turkish online mentors, although recent theories such as constructivism and social learning, have suggested a shift in teachers' role from expertise to facilitation. Mentors have not been regarded as content experts but as guides, counselors or moderators, who help students construct their own meaning about the content area. The study has also revealed that Turkish mentors do not have enough skills to design online learning environments. This result has supported Aydin and Tasci's study (2003) in which they investigated Turkish companies' readiness for e-learning and found out that companies were ready in terms of many factors such as technology and resources, but needed human resources who are qualified in design, development, implementation and evaluation of e-learning. By comparing the results of the former study and this study, it can be claimed that there is a shortage of human resources qualified in online education in Turkey. In addition, this might be one of the barriers of diffusion of online education in Turkey.

On the other hand, in terms of attitudes, beliefs about integration of technology in daily life, effectiveness of distance learning and managing time efficiently were regarded as very important by the participants. As mentioned in the results and discussions, mentors' attitude toward written communication reflected the general characteristics of Turkish culture. To put it more simply, in a high context culture, such as is the case in Turkey; people prefer to use a lot of contextual clues to imply the message rather than directly sharing it. Indeed, the cause might lie in the fact that the participants did not indicate a strong preference of written communication (email) over verbal (phone) ones. Since online education is still considered as a text-based technology (Smith *et al*, 2002), this result can be interpreted as a barrier for online education.

In terms of resources, mentors in given context found having easy access to the Internet and its tools for online communications very important for successful online teaching. In addition, by looking at the results for resources related to online education factor, one can infer that mentors were not satisfied with the material (eg, financial, technological) and moral support (eg, encouragement, motivation) provided by their institution, in order to be able design, develop and implement online education. However, they found these kinds of supports very important for teaching online successfully.

Third, this study uncovered several implications for IMP administrators, as well as those who plan to use the same type of mentors or who plan to design the same sort of online program. One of important implications lies in the interaction between mentors and students. As indicated in the literature (eg, Angeli *et al*, 2003; Moore & Kearsley, 1996; Sabry & Baldwin, 2003) interaction has been identified as the key for success in any online education initiative. It seems that the design of IMP does not really require and promote any kinds of interactions. This may create problems, such as feeling of isolation, lack of adequate support among students as well as mentors. Thus, requiring and encouraging mentors to perform the process and the content facilitator roles more often might help their motivation and commitment to the program. Students also should be encouraged in participating in these interactions. Using students' participations to the interactions as a part of assessments was offered as one of the practical ways of ensuring participation (e.g. Collision *et al*, 2000). Besides, promotion of contributing to the discussions in the social interaction environment (Ders Arasi) might help mentors and students establish better discussions on content-based topics and might promote building an online learning community. Moreover, training mentors on effective

asynchronous and synchronous communications, involving them into design and development of the course materials, and providing opportunities to students and mentors to meet online after working hours, might help to overcome some of the problems, such as feeling of isolation, lack of enough support, motivation to learn, etc.

Finally, this study has provided a list of detailed roles, skills, attitudes and resources for online teaching. These can be used in any other context. For instance, these competencies and resources can be used as criteria for measuring readiness for online education in an institution or teachers' readiness for online teaching. Also, other researchers may use them to make comparisons between various contexts or even to conduct cross-cultural studies. It might be interesting to see whether those studies also support Le Boterf's claim or not. Additionally, further research with a diverse group of Turkish practitioners might provide better data on online teaching roles and competencies specific to Turkish culture.

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