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## Interaction in Turkish Distance Education System

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The aim of this article is to review the interaction in the Turkish distance education system, Open Education Faculty (OEF) of Anadolu University. The article examines the Turkish distance education system, according to the following four types of interactions; (a) learner content interaction, (b) learner-instructor interaction, (c) learner-learner interaction, and (d) learner-technology interaction. The major problem areas concerned in the interaction of Turkish distance education system, OEF are discussed. Consequently, this study provides some guidelines to enhance the interaction in OEF.

Wagner (1994) defined instructional interaction as the events that take place and allow communication between the learner and the learner's environment. Collins and Berge (1996) stated that "interacting with content means actively processing and combining this content with prior knowledge." Interaction is an active process which requires learners to do more than passively absorb information. Various types and levels of interaction exist in distance education courses. High levels of interaction are possible despite the physical separation of the instructor and the learners. Technologies, which are available today, allow a high degree of communication between the instructor and the learners and among the learners.

Interaction aid in the transfer of knowledge is conducive to active learning (Murphy, 1996). Various types of interaction aid reach various types

of learners (Moore & Kearsley, 1996). Increased interaction can improve learner motivation, achievement, and attitude toward learning. Three types of interaction have been identified by Moore (1989). In addition, a fourth type of interaction has been identified: learner-interface interaction (Hillman, Willis, & Gunawardena, 1994). Examples of the various types of interaction include the following: *teacher-learner interaction*: questioning strategies, *learner-content interaction*: group discussion and case studies, *learner-learner interaction*: role playing and discussion, and *learner-technology*: synchronous and asynchronous communication (Paulsen, 1995).

Distance education programs worldwide use a variety of technologies that include print materials, audio and video cassettes, audio and video teleconferencing, computer-mediated communication (e.g., electronic mail, computer conferencing, and more recently, the Internet). Technologies that deliver instruction to distance learners are often classified as two-way interactive or one-way non-interactive (Bates, 1995).

Technologies used to deliver distance education programs in Turkey are typically one-way and are designed to reach the masses (Murphy, 1996, p. 419) and there are some important problems concerned in the interaction in distance education.

The aim of this study is to describe and examine the Turkish distance education system, Open Education Faculty(OEF), according to the following types of four interactions: (a) learner-content interaction, (b) learner-instructor interaction, (c) learner-learner interaction and (d) learner-technology interaction. The other aims are to discuss the major problem areas concerned in the interaction in OEF and provide some guidelines to enhance interaction in OEF.

## **Review of the Literature**

Hewson and Hughes (1999) presented an evaluation of one postgraduate subject (Information Technology for Teaching and Learning at the University of New South Wales), which is taught entirely online and uses public-domain browsers, e-mail and file transfer, and is integrated with software developed by the authors. They say that Web Teach facilitates teacher/learner and learner/learner interactions.

Offer and Lev (1999) discussed the use of distance learning systems, teacher/learner interactions in the classroom as well as in distance learning, student achievement, training teachers to use interactions, the model of decision making to operate distance learning, and an example of a distance-learning system in Israel between universities and secondary schools.

Simonson, Schlosser, and Hanson (1999) discussed the need for theory in the field of distance education, review several traditional theoretical approaches, and describe a new theory called “Equivalency Theory” that incorporates telecommunications. They compare theories of independence and autonomy, industrialization of teaching, and interaction and communication.

Hassenplug and Harnish (1998) analyzed learner-content, learner-instructor, and learner-learner interactions in six distance-learning courses offered at technical institutes in Georgia. They indicated that both faculty and students were satisfied with all three types of interaction in these courses.

Mann (1998) presented an overview of the University of Surrey (UK) MA in Linguistics (TESOL) by distance-learning program and discusses quality-assurance measures such as learner-content (topic-focused bibliographies, study guides, updated modules, resource centers), learner—instructor (feedback, tutoring, pastoral visits, assessment, and grievance procedures, dissertation supervision, student representatives), and learner—learner (pen pals, group meetings) interaction.

Repman and Logan (1996) explored techniques for creating cohesive active learning communities in which information can be linked to real-world experiences, discussed four types of interactions that take place in distance learning environments: (a) learner-content, (b) learner-instructor, (c) learner-learner, and (d) learner-interface. They offered strategies for overcoming common barriers to these interactions.

Based on a review of the literature Berge (1995) examined the roles of a computer conference moderator in distance education. He pointed out the role of technology in distance education; interactions in learning, including synchronous and asynchronous interaction; reliance on discussion; and pedagogical, social, managerial, and technical aspects of moderating.

Picciano (1998) found that instructors’ activities were related to students’ perceived learning in online education courses. Jiang and Ting (2000) found correlations between perceived interactions with instructors and the average numbers of responses per student that instructors made and the average

numbers of responses students themselves made in course discussions. Richardson and Ting (1999) compared the perceptions of two groups of students involved in asynchronous learning. They found that students learning through written correspondence with instructors were more concerned with instructor feedback, whereas students learning online believed that all interactions with instructors mattered.

Other researchers have investigated changing roles of teachers working in virtual classrooms. Coppola, Hiltz, and Rotter (2001) asserted that in any environment, teachers have three roles; cognitive, affective, and managerial. They found that online the cognitive role shifts to one of deeper complexity, the affective role requires faculty to find new tools to express emotion, and the managerial role requires greater attention to detail, more structure, and additional student monitoring. Anderson, Rourke, Garrison, and Archer (2001) reported similar categories of what they called “teaching presence” (direct instruction, facilitating discourse, and design and organization) and similar shifts in responsibilities. Fuller, Norby, Pearce, and Strand (2000) used “Myers-Briggs and Transaction Ability Inventories” to relate teaching tendencies and styles to instructor effectiveness and satisfaction in online environments. They identified four challenges for virtual instructors:

- overcoming the faceless classroom;
- adapting to student centered teaching;
- managing time and techniques; and
- establishing the learning community.

Researchers who have investigated collaborative learning online have found it remarkably unsuccessful (Sturgill, Martin & Gay 1999; Hawisher & Pemberton 1997). Hmelo, Guzdial, and Turns (1998) suggested that asynchronous formats might not be appropriate for the negotiation of difficult issues that require rapid turn taking in conversation and shared access to objects that cannot be easily referenced in electronic spaces.

## **INTERACTION IN TURKISH DISTANCE EDUCATION**

In this section of the article we examine the Turkish distance education system, Open Education Faculty(OEF) according to the following four types of interactions (a) learner-content interaction, (b) learner-instructor interaction, (c) learner-learner interaction, and (d) learner-technology interaction.

### **Learner-Content Interaction in Turkish Distance Education**

Learner-content Interaction which teachers need to generate is “the interaction the student has with the subject matter... Every learner has to construct knowledge through a process of personally accommodating information into previously existing cognitive structures” (Moore & Kearsley, 1996, p. 128).

Learner-content interaction takes place in a variety of ways, particularly with the one-way technologies in other distance education programs. Printed materials, which are typically combined with other technologies such as audiotapes, videotapes, radio, television, and one-way videoconference, provide for learner-content interaction (Murphy, 1996, p. 420).

Technologies used to deliver distance education programs in Turkey are typically one way and designed to reach the masses. Learner-content interaction in Turkey is designed to occur through self-instruction with textbooks and optional television and radio broadcasts (Murphy, 1996, p. 419). The Open Education Faculty’s system is based on the combination of three educational components; printed materials, television and radio broadcasts, and academic counseling (Demiray, 1990).

Printed materials are prepared by the academic staff from various universities and edited by the faculty members of Anadolu University according to the principles and techniques of distance learning. These materials are sent to the students by the regular channels.

Murphy (1991) said that based on Turkey’s roots in an oral tradition, it was not surprising that many first-year OEF students described the textbooks as the most useful instructional aspect. Others, however, found that learning solely from textbooks posed challenges and restricted interaction with the content. Bozok (1988) reported that 85% of the learning at the OEF should take place through studying the textbooks in each of nine required subjects.

Günay (1990) examined relationships between the TV course programs of OEF and printed materials. Şimşek (1994) reported that printed materials of OEF should be written according to the writing criteria to be successful and functional of books to teach itself to the students.

The Turkish Government began to use radio in the distance education program in 1973. Turkish Correspondence programs transferred their instruction to students by radio. Therefore, radio had been used in distance education for a longtime (Demiray, 1990). The Turkish Distance Education Department began to use television to deliver their instruction to students in 1982.

Television and radio broadcasts are designed to be supplementary to the printed materials in OEF. As in the printed materials, various university members work on television and radio programs, either as authors or as tutors (or both). Broadcasting services are carried out by the state owned Turkish Radio and Television (TRT) corporation (Demiray, 1990).

According to the findings of a study (Gültekin, 1989), student were beware of watching TV programs; but the watching rate of students generally wasn't fit. In an other study named "Evaluation of the Open Education Faculty's TV course programs" (Özbilgin, Işık & Yıldırım, 1985) the results were following: students generally benefited from these programs, but broadcasting hours of these programs were not available enough to help students' learning process and students couldn't enough benefit from this TV broadcasting.

Sağlık (1985) proposed a model suggestion for using radio as an education medium for the Anadolu University Open Education Faculty and its application. This model consisted of the criteria of the educational radio programs with the other teaching materials in distance education. Sezgin (1997) emphasized that course materials and educational radio programs' content should be similar and educational radio programs should broadcast at the most suitable hours for its target audience, and also, should be shorter and use a special expert area for the educators.

Murphy (1991) stated that despite the problem of access, the first year students who watched the programs in conjunction with their textbook lessons

The researches concerning the use of video, which has started to be used

for educational purposes in Turkey in the 1980s, stating that video was used rather as a leisure time instrument. There are some opposing approaches stating that video had already started to be used for educational purposes-though not on a large scale (Demiray, 1990).

Barkan and Demiray (1989) tested the functions of video in the distance education system of OEF, as an educational environment. In this study, operating of the system and data obtained from the application of video instruction was tested by a *t* test. Results showed that the video instruction affected the “learning success” of the student between 40 and 60 points more than before. Demiray, Mc.Isaac, Barkan, and Murphy (1988) discussed the educational function of video in distance education systems and the first project application of the OEF’s Konya and Denizli Student Information Bureaus. Results showed that education by video increased students “learning ability” 45-60 points more.

It is to address the difficulty of student access to programs, which are broadcast only once, that Video Education Centers were set up in different cities (McIsaac, 1988).

Two pilot projects undertaken in 1987 by the OEF of Anadolu University were designed to determine whether distance education students would benefit from watching videotapes of the educational programs if they were made available at Education Centers.

Video education as it is planned at the beginning of the project is a supportive service. In other words it does not propose to teach English to complete beginners but to support OEF students learning English as an additive service to other instructional means such as books, TV, and radio broadcasts, academic supervising services, and so forth. Video education services are only for distance education students of the Open Education Faculty.

### **Learner-Instructor Interaction in Turkish Distance Education**

Learner-instructor interaction includes the methods/actions the instructor uses to motivate students and activate them to complete assignments. Instructors cannot simply upload text to the Internet or lecture during a video conference. “After the content has been presented... the instructors assist

the students in interacting with it... they try to stimulate or at least maintain the students' interest in the subject and their motivation to learn" (Moore & Kearsley, 1996, pp. 129-30).

Learner-instructor interaction occurs primarily with one-way technologies supplemented with two-way technologies in other distance education programs (Murphy, 1996, p. 421). Because of the technologies used to deliver distance education programs in Turkey are typically one-way, learner-instructor interaction occurs at the OEF through lectures delivered weekly in university classrooms and auditoriums in cities and towns in the evenings and on weekends.

Academic Counseling Centers are located in 55 cities. At these centers, students receive advisory help provided by part time instructors and academic advisors who are selected from among the regional university members. One hour per week of counseling services per course is provided to students at these centers. Approximately 80% of the students have regular access to these centers. At these centers there are additional services such as videos, *Anadolu Newspaper*, and other official services for students. These three parts of the distance education program work together as very functional components of a smoothly running system (Demiray, 1990).

In a study (Serter, 1986), named "Evaluation of the Academic Counseling Services in The Open Education Faculty," the author reached the hypothesis that the expectations of students and education staff from Academic Counseling Services are different states; that expectations of students become more different at the end of the year of the application, and besides evaluating this differentiation as a kind of awareness, it can also be seen as the forming of an open education student type.

These lectures were available for approximately 84% of the OEF students—those who lived in urban centers. In 1987, Murphy (1991) found that only a small proportion of the OEF students reported regular attendance at the lecturers in one city.

Murphy (1991) observes that Turkey's patronage system influences traditional face-to-face education where students offer their continuing loyalty and respect to their professor, or patron, and in return receive knowledge and wisdom. It is the professor's responsibility to interpret "text" to students, just as the students are expected to memorize the words of their esteemed professor. She points out that Turkish distance learners, however,

lack access to an esteemed professor, and thus function outside of the traditional patronage system. The distance learners, therefore, formulate their own structures of alliances and cooperation, both within and outside of the OEF. These learners may attend the lectures in order to learn cooperatively with fellow students.

Learner-instructor interaction occurs informally when students ask faculty directly about their classes, something particularly possible for students employed at universities. OEF and Open High School (OHS) students can also interact with administrators through visits, telephone calls, and correspondence.

Güneş (1988) noted that a centralized computer assisted instruction model and tutors could be accepted as the fifth component of the Open Education Faculty. According to him, four interrelated educational component were the following: text, TV and radio programs, video education centers, and academic counseling instruction.

### **Learner-Learner Interaction in Turkish Distance Education**

The third form of interaction is “interaction between one learner and other learners, alone or in group settings, with or without the real time presence of an instructor” (Moore & Kearsley, 1996, p. 131).

Learner-learner interaction typically occurs in applications using two-way technologies, provided that learning experiences are designed to promote this interaction (Murphy, 1996, p. 421).

Learner-learner interaction is not part of the formal design of Turkish distance education programs. Because the educational system emphasizes rote learning and memorization, learners are typically required to recite and memorize from their texts. However, the Turkish culture itself fosters interaction among OEF students through their work sites, in face-to-face lectures, and in courses that students attend outside of the distance education programs (Murphy, 1991). To be two-way technology, computer-mediated communication (CMC), which includes e-mail, computer conferencing, electronic bulletin boards, and the Internet, promotes interaction among learners through discussion and resource sharing (Murphy, 1996, p. 421).

Murphy (1991) noted that in Turkey, distance learning, as a form of education, reflects traditional face-to-face education, and stated that the communication technologies associated with distance learning may provide the impetus for overcoming learning impediments that are both unique to the culture and ingrained in traditional forms of education. She observed that Turkish students found substitutes for teachers (patrons) among their classmates and colleagues. It is possible that technologies such as computer conferencing that foster collaborative work may break traditional forms of teacher oriented education, and incorporate interaction into distance education.

In 1992, a computer-mediated distance education was implemented between the Turkish Open University and American universities such as the University of New Mexico, the University of Oklahoma, Florida State University, Arizona State University, and the University of Wyoming. In Turkey, American and Turkish students took some courses from this system.

With the computer aided studies of National Education Ministry and connection of the computers in the laboratory that is constructed in Anatolia to a national network, the students in Anatolia and big cities will be served a great amount of information and they will be able to contact the students at their level.

There is a great tendency toward web-based instruction programs in most open universities and other educational institutions. Some have already started to offer an online degree or certificate program. For example, Anadolu University has provided online self-test opportunities for its distance learners since 1998. Anadolu University has also been trying to offer some online alternative courses for its oncampus students to be able to understand how feasible, effective, efficient, and appealing it is to offer online programs, and established a foundation for a "virtual" university in 1998. Starting Fall 2001, the University will offer an online two-year online degree or certificate program.

In 2000-2001 educational year, this program has served lesson materials on the Internet and also another instruction services as books, software, digital video, academic counseling service, exams, student department, support, and virtual class breaks.

### **Learner-Technology Interaction in Turkish Distance Education**

Hillman, Willis, and Gunawardena (1994) addressed a fourth type of interaction between the learner and the technology or technologies used in distance education courses. They argued that “a learner must use these intervening technologies to communicate with the content, negotiate meaning, and validate knowledge with the instructor and other learners.” Instructors cannot assume that each learner will be familiar with the technologies which are used in a course, or that the learners are comfortable with those technologies. In cases where learners are just becoming familiar with a new technology, there will often be a period of time in which they are hesitant and tentative until they acquire sufficient confidence to access the technology on a regular basis. This should be of particular concern to instructors since the learner who is unskilled in interacting with the communication medium must retrieve information may lead to frustration and certainly does not contribute to the learner mastering the information. To participate in class activities, learners will need to reach this comfort level. Once this comfort level is reached, learners can focus on the content and are more likely to participate in class activities and interact with the instructor and other class members.

As distance education becomes more closely associated with advanced technologies, the students’ interaction with those technologies becomes increasingly important. When students are expected to use sophisticated equipment to learn, it is important to ensure the equipment helps rather than hinders the educational process.

Much study has been conducted on how students interact with various types of media. In some studies, technologies that deliver instruction to distance learners are often classified as two-way interactive or one-way noninteractive (Bates, 1995; Murphy, 1996).

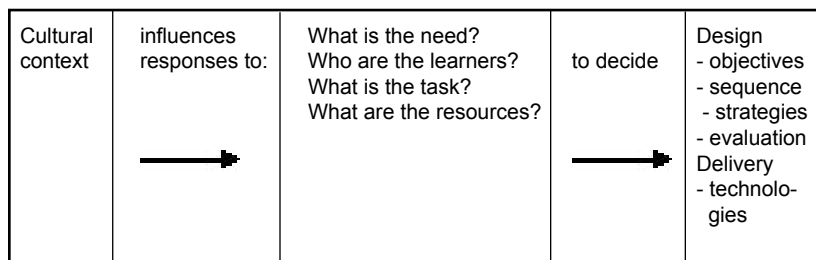
Technologies used to deliver distance education programs in Turkey are typically one-way and she integrates technologies in distance education primarily by combining one-way technologies of text and television. Learner-technology interaction is not part of the formal design of distance education programs of Turkish distance education system, Open Education Faculty.

## DISCUSSION

Interaction is an important part of all forms of learning. Interaction legitimizes distance education (Patsula, 2002), and Turkish distance education system, Open Education Faculty(OEF) of Anadolu University, already provides for three forms of interaction; learner-content, learner-teacher, and learner-learner interaction. But learner-technology instruction already is not part of the formal design of OEF distance education programs.

There are some models and guidelines (Murphy, 1996) to enhance the interaction in Turkish distance education; Murphy suggested a model of cultural influences on interaction in distance education.

Implications of the cultural context for interaction in distance education reside primarily in the process of design and development. Figure 1 illustrates this process. In brief, when designing distance learning materials, the instructional designer first asks a variety of questions about the need, learners, task, and available resources. The cultural context frames the designer's responses to these questions. Based on the responses, the designer makes decisions about design and delivery of the instruction. At the design stage, the designer defines the learning objectives, determines the instructional sequence and structure, and decides on the teaching strategies. Delivery issues include the technologies to deliver the instruction.



**Figure 1.** Model of cultural influences on interaction in distance education (Source: Murphy, 1996, p. 422)

She asserts that interaction in Turkish distance education can be enhanced by following this model. Turkish distance education already provides learner-content interaction through one-way technologies. By applying instructional strategies and interactive technologies that are inspired by cultural context, distance education can also enhance learner-instructor and learner-learner interaction (Murphy, 1996, p. 422).

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Murphy (1996) observed that cultural context is a critical ingredient in the development of Turkish distance education programs. She suggested they use the instructional strategies and interactive technologies, like telecommunications, that are inspired by Turkish cultural context to enhance the interaction and designing media based support systems for Turkey.

The following are the major problem areas concerned with four type interactions in Turkish distance education system, Open Education Faculty (OEF):

1. *The Major Problem Areas on the Learner-Content Interaction in OEF*

1.1. The effectiveness from the point of view of individual learning and delivering by regular channels of printed materials.

1.2. The relationship between the printed materials and TV broadcastings.

1.3. The suitability and accessibility of the radio and TV broadcastings.

1.4. The support for the other one-way technologies (radio, TV broadcasts, textbooks and academic counseling services) of Video Education Service in OEF.

2. *The Major Problem Areas on the Learner-Instructor Interaction in OEF*

2.1. The use of two-way interactive technologies for enhancing learner-instructor interaction.

2.2. The use of radio, video, and Internet to interact with instructors and administrators.

2.3. The suitable time for the face-to-face lessons and low-participation to lessons.

*3. The Major Problem Areas on the Learner-Learner Interaction in OEF*

3.1. The use of two-way interactive technologies to promote learner-learner, interaction

3.2. To enhance learner-learner interaction and cooperative learning, the use of present technologies such as the computer-mediated distance education, web-based instruction, CD-ROM software, video, and Internet.

*4. The Major Problem Areas on the Learner-Technology Interaction in OEF*

4.1. Learner-technology interaction is not part of the formal design of Turkish distance education (OEF) programs. But, while a well-developed distance education requires an infrastructure of telecommunications and information technology, Open Education Faculty (OEF) of Anadolu University system has a moderate infrastructure and great capacity and a well-developed distance education system. OEF, already, strives to employ some distance education one-way technologies, such as video, computer, and the Internet, in distance education processes. The major problem area concerned with the learner-technology interaction in OEF is to apply instructional strategies and interactive technologies that are inspired by the Turkish cultural context, practices, beliefs.

## **GUIDELINES**

The following guidelines can be provided for enhancing the interaction for OEF:

1. Distance education programs must be based on cultural, social, political, and economic factors and context.
2. For selecting and delivering media the instructional designers should take into consideration the eight practical guidelines; cost, accessibility, openness/flexibility, interactivity, motivational value, effectiveness.

Interaction, that legitimizes distance education, is the most important factor when selecting one-way or two-way media.

3. Video Education Center have to provide the learner-instructor and learner-learner interaction such as learner-content interaction.
4. The present technologies such as radio and Internet have to be used to enhance interaction with instructors and administrators.
5. OEF using of present technologies and methods as; computers and CAI unit, web-based instruction, video education center, CD-ROM software, and Internet have to organize cooperative work and learning, and orientation programs for students.
6. The printed materials should be prepared with the method of programmed instruction, be sent to the students by more regular channels and well supported by TV and radio broadcastings.
7. To enhance learner-technology interaction, OEF, should apply two-way interactive technologies and instructional technologies (telecommunications) that are inspired by the Turkish socio-cultural context, practices, and beliefs. But they should take into consideration the economical and political factors and context.

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