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The Applications And Problems On The Distance Teacher Training in Turkey

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Introduction

Educational technology has changed the definition of classroom in terms of location, size, composition, learning environment, and teacher role. Educational technology in developing nations helps accommodate people in poor and rural areas.

The Association for Educational Communications and Technology (AECT) officially adopted and approved the following definition of instructional technology: "Instructional (educational) technology is the theory and practice of design, utilization, management and evaluation of processes and resources for learning" (Seels & Richey, 1994, p.1). Interestingly, the words "technology" or "technological" are never used in this definition.

Distance education, which is a very important instructional technology, through open universities has increased in several countries. It includes two-way communication media that allow for direct interactions between teachers and remote students. It conquers restraints imposed on conventional education by time and space, and offers higher quality instructional design.

Murphy (1996, p. 418) said that distance education programs worldwide used a variety of technologies that included print materials, audio and video cassettes, audio and video conferencing, one-way and two-way television, computer-mediated communication (e.g., electronic mail, computer conferencing), and more recently, the Internet. Bates (1995) classified the technologies that delivered instruction to distance learners as two-way interactive or one-way non-interactive.

The tendency in the World about distance education is to pass from single-mode that doesn't allow student- instructor interaction to the multi-mode that has important interaction elements. One way video conference and television programs are generally supported by telephone or fax in order to establish two way communication between student and the instructor.

The point that is reached in the subject of distance education is the interactive education that is served through world wide web(WWW)or videoconference through Internet. Distance, or 'Virtual', education which uses the possibilities of hyper media and hyper text gives the opportunity of reaching more students worldwide. The video conferencing through Internet may be much cheaper than the educational television programs.

The use of audio to distribute content over the Internet is another viable alternative audioconferencing is pedagogically learner centered because it provides all learners with the opportunity to be active participants is an older technology that involves the broadcasting of video in real time simultaneously to many recipients (Wilson & Hord, 2000, 39-41).

Distance education can produce significant cost savings by allowing teachers to optimize existing resources. For example, teachers can use the Internet to gather information, and colleges can hold distance education in existing settings rather than constructing new buildings and classrooms. Distance education provides continuing education to practicing teachers in all settings. Multi-mode approaches using distance and conventional methods offer the most comprehensive teacher training. Distance education can address the shortcomings of conventional education (e.g., high costs, need for physical infrastructures, and need for full-time teachers). Conventional education can address the impersonality of distance education by providing practical training in actual schools and institutional summer schools. To complete teacher training programs or degrees, distance education offers pre-service and in-service teachers with both skills training and an opportunity.

Utilizing Distance Education For Teacher Training In The World

In this section of our study we want to introduce the international literature on utilizing distance education for teacher training in the different countries of the world.

Review of the International Literature

When we review the literature on the distance education for teacher training we see developed countries use, generally, two way interactive technologies and some models and applications such as virtual teacher training (Twomey, 2002) and on-line teacher training (Rogers & Coles, 2000). The most common distance education technology in teacher training is Internet (Reynolds, 2002; Karsenti, 2001; Corneaux, 2001; Hanson, 2000; Carr, 2000).

Farkas and others (1993) surveyed the teacher distance education programs in the following countries: Africa, Australia, Canada, Denmark, France, Iceland, Japan, Portugal, Thailand, Turkey, United Kingdom, and United States. The study represented a diverse collection of pedagogical issues involved in teacher training at a distance education in countries throughout the world. This survey on the teacher training through distance education included several issues: 1) the objectives for the use of distance education; 2) methods and delivery systems used in various settings; 3) costs involved in design and delivery of teacher training at a distance; and 4) lesson learned, which may provide the reader with guidelines to follow.

A report (Moursund & Bielefeldt, 1999) described a national survey of U.S. schools, colleges, and departments of education (SCDEs) to determine how they prepared new teachers to use information technology (IT) in their work. A 32-item survey had respondents rate their teacher-training institutions on coursework, faculty capacity and use of IT, facilities, field experience opportunities, and graduates' skills. A total of 416 institutions responded, or about one-third of U.S. SCDEs for 1997-98. Data analysis indicated that the technology infrastructure of education increased more quickly than SCDEs could incorporate new tools into teaching and learning. Faculty IT skills were comparable to student IT skills, but most faculty did not model IT skills in teaching. Distance education and computer-assisted instruction only affected small proportions of pre-service teachers. Most programs did not have written, funded, current technology plans. Most institutions had IT available in K-12 classrooms for student teaching, but IT was not used routinely during field experiences. The number of hours of IT instruction integrated into other courses had a moderate correlation with other survey scores, but the number of hours of formal IT instruction did not. The integration factor (items that addressed graduates' classroom skills and actual use of IT during college training) was the best predictor of other survey scores.

Jolia (2001) introduced a socio-constructivist hybrid model for training K-12 teachers in Brazil in the use of Informatics in education. He determined that the method applied combined both face-to-face exchanges and a web-based distance approach made possible by Internet technology.

Back and Westrom (2001) talked about a system named "The Cyber Teacher Training". This system for the delivery of teacher training on the Internet was being developed in Korea. The main goals of the system was to minimize teachers' retraining cost and to extend opportunities for retraining programs for all teachers.

Kapyla and Wahtstrom (2000) explained that Finland's Ministry of Education sponsored the development of an environmental education (EE) course for practicing educators of teachers. The course focused on personal development and curriculum development. Teacher training who attended the course learned and applied new teaching practices and produced new model lessons. They also reflected on their personal environmental philosophy and gained in environmental knowledge. According to Kapyla and Wahlstrom (2000) this 2-step distance education model could be used for large-scale implementation of EE for in-service teacher training.

Saga (1996) determined that, in Japan, the educational use of computer communication networks was quickly growing. Although formal teacher training through distance education was very limited, substantial numbers of teachers were very active on personal computer networks and were training themselves mutually and were spontaneously. He determined that teachers' use of computer networks and were training programs were of assistance.

Ingesman (1996) talked about a distance teacher training course was developed as a distance learning course. The learning objective of the course was to enable distance teachers to develop and run courses at a distance by using computer conferencing systems or general electronic communication. Focus was placed on the three fundamental elements of pedagogy, organization and technology. The computer conferencing system enabled individualized learning and tutoring, classroom discussions, and constant adjustment of the material and the learning process.

McDonald(1995) examined the use of distance education in field experiences for student teachers at the University of South Africa (Unisa). At Unisa, teacher training occurred through either a three-year degree followed by a higher education diploma (HED) or a one-year integrated teaching degree. The distance education model that attempted bridge the gap between theory and practice in field experience was structured around the one-year postgraduate HED. Students had to arrange their own teaching practice. Their only support was a workbook, which provided them with opportunities to carry out structured reflective practice and evaluation. After completing the work book assignments, students were required to present two lessons, which were examined by the school principal and another school representative.

Ding (1994) determined that China had four major higher distance education providers; Satellite TV teacher training was one of this major providers. He analysed the system and structure of China's higher distance education from an organizational and administrative perspective. Zhang, Niu and Jiang (2002) introduced a descriptive analysis of web-based educational practices at 44 leading conventional universities in China. They determined

that teacher training was one of the most important problems concerning with the web-based education at conventional universities in China.

Mayes (2000) described the Open University's Postgraduate Certificate in Education, a postgraduate preservice teacher training program in the United Kingdom. The program provided access to the teaching profession for those who couldn't train by conventional routes. It was characterized by: distance education; school-based partnerships; an explicit framework of outcome assessment standards; a portfolio, model of formative and summative assessment; a network of support via local tutors, regional seminars, and workshops; a regional and national e-mail and e-conference system; national availability; and part-time, asynchronous, home-based study. This supported open learning and school-university partnership model had proved successful in recruiting trainee teachers in the context of a United Kingdom teacher recruitment crisis, widening access to the profession for underrepresented groups and prompting the professional dimension in teacher assessment. This teacher education model, and its systems, structures, and underlying principles, had been the basis of a number of successful international collaborations, including with the United States, where there were common issues of teacher quality, teacher recruitment, and school improvement.

Lea (2000) evaluated use of open and distance learning in pre-school teacher training in Norway, Scotland, and Iceland. A model of preschool teacher education was developed in which students received a 3-year educational program over 4 years while working as kindergarten assistants. The program operated through the collaboration of university and local authorities. Local study groups met once weekly in a regional study room. Four regional groups met six times yearly. The entire student group met six to seven times yearly for direct teaching at the college. Teaching methods used were written communication (computer, study letter, telefax), sound-picture communication (videos, sound tapes), and oral communication (telephone, central meetings). Evaluations were based on interviews with 27 teachers at 2 colleges in Norway, 10 teachers from one college in Scotland, and 12 teachers from one college in Iceland. Results were categorized in the following areas: (1) challenge of using different teaching methods in different subjects; (2) professional aspects of using distance learning, including the development of responsibility, reflection, problem-solving, and cooperation; (3) the teacher and student role; and (4) flexible teaching in ordinarily organized teacher education. The results indicated that the most important challenge was for teachers and students to bridge the distance between them. It was important for students and teachers to be confident in equipment use and for technical expertise to be readily available. Resulting recommendations for the program related to planning pre-service pre-school teacher education, the teacher's role or obligations, the cooperation between teachers and students, and professional development.

Calderoni (1998) determined that Telesecundaria, Mexico's television-based rural education program, had been in operation for over 30 years and teacher training was one of the most important problems on the television-based rural education programs; In-service training of Telesecundaria teachers was also provided through televised programs and the satellite that distributed the program reached beyond Mexico-Panama, Costa Rica, and Guatemala were using it.

Arora and Pandey (1998) described changes required of distance teacher training facilities in India, and a case for use communication technologies to train a huge number of teachers in schools. Trentin and Scimeca (1999) described an Italian pilot project that studied the use of Information and Communication Technologies (ICT) in in-service teacher training for online distance education courses.

Peraya and Levrat (1999) talked about the development of distance education in Switzerland. They determined that teacher training was one of the most important problems in Switzerland. They introduced the integration of information technologies, teacher training, and the management of metadata in Switzerland.

Nielsen (1997) discussed the use of distance education for pre-service, in-service, and continuing-teacher training and provided examples of quality distance education programs for teachers in Australia and Sri Lanka.

Korum (1994) determined that European education projects in which exploitation of Information Technology had been a means as well as a goal were described; 1) The Council of Europe had begun a series of workshops, number 7 of which was on using information and communication technologies in modern language teaching and learning in Europe. Themes for further development included: interactive multimedia in language instruction; databases and, courseware; telematics; and teacher training, 2) The Lingua project connected French teachers in Denmark, Greece, Belgium, and the United Kingdom in pursuit of better quality electronic mail communication among language professionals, 3) The European Studies Project, begun by Ireland, Great Britain, and Northern Ireland for international discussion of the theme "conflict", links schools in different countries by electronic mail to examine a variety of European issues, 4) Denmark has begun a teacher training initiative to encourage teachers to explore and exploit the potentials of new technologies in teaching and learning at all school levels, 5) A Danish distance education project was focused on training teachers in the use of information technology at all educational levels.

Veen (1996) described the experiences of four university teacher education institutions collaborating in an European Union-funded project called the REFLECT project: the Universities of Barcelona (Spain), Exeter (England), Trondheim (Norway), and Utrecht (Netherlands). The projects' focus was on the development of reflective competencies in pre-service and beginning teachers using various modes of distance education, especially remote computer conferencing or "tele-guidance". In this partnership, the participants collaborated on two levels: first; collaboration between teacher-educators developing a pedagogy of tele-teaching and, second, collaboration between university teachers and student teachers during pre-service teaching experiences. Each institution used a different theoretical model to develop reflectivity and different electronic delivery modes varying from video conferencing to one-to-one e-mail. All tele-tutoring was embedded in regular teacher training. The Dutch experiences indicated that an established organization with common standards for the exchange of messages was a critical condition for a well-functioning computer conference. The Exeter experiences focused on analysis of teaching of the subject versus analysis of performance in the communications process. The Utrecht project focused on reflection as part of a problem solving process and the Barcelona project on the degree to which teachers critically reflect on values embedded in their thinking and practice.

Senisrisant (1996) examined the development and success of a pilot teacher training program in Thailand. The 1993-1994 long-distance, English teacher, secondary education pilot program was an inexpensive, effective model that could be used throughout the country and that would benefit teachers who are not able to take advantage of conventional in-service programs. Due to limitations of time, finances, and availability of trainers, language skills and teaching methodology of foreign language teachers in Thailand were difficult to maintain. This summary of the pilot program results identified the determining factors of success, outlines some of the drawbacks encountered, and

concluded with an assessment of the likelihood of sustainability of such a model. The program was developed by a cooperative funding effort between the Canadian International Development Agency (CIDA) and the Southeast Asian Ministers of Education Secretariat (SEAMES). The York University English Language Institute (Canada) collaborated with the Singapore-based Southeast Asian Ministers of Education Organization Regional Language Centre on the design of the program, provision of material writers, and transfer of distance education knowledge and skills to the Thai team. The program initially targeted 45 teachers in 2 areas of the country; 36 successfully completed the course requirements..

Buckley (1993) examined the delivery process and the course content of the comprehensive teacher training program, a distance education program of study for untrained Caribbean elementary and primary school teachers. The distance education program offered four courses in core subjects and prepared students to pass Caribbean Examinations Council (CEC) examinations for entry into teacher training colleges. The survey asked students 55 questions on their own characteristics, their experience of program tutors and learning environment, their contact with tutors, their experience with assignments, feedback and evaluation, and their thoughts on overcoming future hurdles in studying at a distance. The data included following: 43 learners responded to the survey; 81.4 percent of these were female; 60.5 percent were from rural and remote locations; 70 percent were in their second year in the program; and 39.5 percent were ages 25 to 29. With respect to the program tutors and learning environment, 81 percent said that tutors had helped them acquire learning and study skills; 19.3 percent sought help from tutors to prepare for exams; most contact with tutors was in face-to-face sessions or during specified telephone hours; 86 percent of students received assignment feedback within 2 weeks; and 58.1 percent received that feedback via a friend, colleague, or relative.

A study entitled "Quality Improvement in Initial Teacher Training and Co-operation in Distance Education in Asia" (1993) reported on the Commonwealth Secretariat UNESCO Regional Roundtable, which was held in Penang, Malaysia as a follow-up to the 1992 Colloquium on Alternatives in Initial Teacher Training, held in Colombo, Sri Lanka. There were 28 participants from Bangladesh, India, Maldives, Pakistan, Sri Lanka, Indonesia, Malaysia, Philippines, and Thailand. This report included an interim statement identifying critical issues related to the quality of teacher training in these 'countries including the process of change, improving teacher performance, and the quality of teacher educators. Action plans of the five nations participating in the previous colloquium were presented and were described in this report. These projects addressed: (1) strengthening the organizational framework of teacher institutions and related activities; (2) alternative strategies for initial teacher training; (3) development of resource centers; (4) professional development of teacher educators and managers; and (5) social mobilization and awareness as a means of improving teacher training.

A study, entitled "Role of Higher Education in Promoting Education for All", (1992) examined the role of higher education in promoting education for all as discussed among representatives from Bangladesh, People's Republic of China, India, Indonesia, Pakistan, Philippines, Republic of Korea, Socialist Republic of VietNam, Sri Lanka, and Thailand. Participants emphasized the importance of institutional, sectoral, and regional cooperation in achieving goals of education for all and development in general. Participants also stressed that literacy and development were closely linked and that higher education had a significant role to play in helping to identify the changing needs of basic education. The ultimate contribution, argued by one participant, which higher education could make to education for all and to development was the production and application of intellectual innovations, knowledge, and ideas. Specific recommendations on higher education's role in promoting education for all include improved teacher

training, curriculum content evaluation, the development of learning packages and management manuals, use of awareness-raising activities, and the employment of the open university model to increase access and alternative modes of delivery.

Some Applications And Major Problems On Using Instructional Media And Technology In Developing Countries

The situation reported by Orson and Greenbert (cited in Levira, 1997) innovations in instructional materials at the University of Nairobi presented a representative case study of media typical of most developing countries. A whole university that houses six colleges in different campuses had a single overhead projector, a single film projector and a photocopier in its media centre all of which are shared among the six different colleges .

It is illogical to expect any better situation in the elementary schools. The traditional media of printed text, the infamous chalkboard, a few models and teachers' own innovations such as straw abacus, and hand drawn graphics are a common scene in the elementary schools. In secondary and post secondary schools and colleges only one of each media equipment as reported by Orson and Greenbert (cited in Levira, 1997) above was not unusual. In fact, the responsibility for development and application of media is left upon teachers, with minimum support from school authority. Besides poverty, it could still be argued that there were causal administrative problems that could be discussed in four areas: low economic and technological development; lack of governing policies; excessive population growth and political instability.

The lack of human resources is another concern in developing countries. There will be a need for trained operators (or for hardware and software that can be used effectively by untrained personnel) and for trained maintenance personnel. In many countries, neither kind of human resource is available, so training will be very important.

The consequence of technological underdevelopment of the developing world is an obvious cause of failure in industrial fabrications for domestic educational media. In turn, the situation leads to high import dependency. It is not surprising, for example, that in many developing nations school materials such as laboratory equipment, chemicals, audio/visual materials and sometimes even paper are imported. The recent global economic recession is magnified in the economies of developing nations. As a result, education in developing countries suffers cuts more than any other sector merely for the simple fact that it is always falsely considered as a non-producing sector. When budgets are so tight and priorities are difficult to define, media materials have always become most vulnerable. In turn, that incapacitates proper functioning of the school systems in general, and in particular, the teaching/learning process.

Instructional Technology Programs In Turkey

In the 1930s, Turkish schools had teaching materials such as maps, laboratory equipments, and film strip projectors for instructional use. Until the 1940s, mostly printed instructional materials were used in schools. Between 1950 and 1970, schools had technologies such as audio cassettes and overhead projectors. Distance education was first introduced to students in Turkey in 1974. During the 1970s, several new teaching materials were provided for schools and introduced to teachers. In addition, some big universities started to offer graduate programs aimed at training professionals in the field of educational technology. Though some of these traditional technologies are still in use to prepare students, educational policy makers in Turkey believe that schools must give students the knowledge and the skills they will need in the future. Because of

this,computers have gained more importance than any other educational technology(Akkoyunlu &Orhan,2001).

Distance Education in Turkey

Although the distance education implementation in Turkey started in 1982, the discussions about distance education in general took place as early as 1927. This concept was thought to be beneficial in increasing the literacy rate among the citizens in Turkey. In those years, the other countries had already initiated the education through correspondence by mail. Due to the common belief that people could not learn reading and writing without a teacher, the idea of distance education was not considered in Turkey until 1956.

Between the years 1927 and 1955 the distance education merely remained as an idea. The first distance education project was initiated at the Research Institute of Bank and Trade Law, Faculty of Law, Ankara University in 1956. In this implementation, the bank employees were educated through correspondence by mail. In 1961, The Centre for Education through Letters was established as a sub-organisation of Ministry of Education, Turkey. This scheme targeted people who wish to complete his/her secondary education without attending courses. These attempts were extended in 1966. The establishment of Advanced Teacher Education School followed it. Later on in 1975 and 1978 two attempts to establish an "Open University" were unsuccessful. In other words, in Turkey, "Education Through Letters" (called in Turkish as being YAY-KUR) was implemented as a correspondence education. However, required efficiency and success were not attained.

Again in 1970's, Eskisehir Economics and Commercial Academy, The Institute for Education through Television became a pioneer in the distance education area. In 1981, a governmental campaign was started to reduce illiteracy rate in Turkey. In this attempt, television was an important education tool. The program achieved a considerable success with a considerable increase in the literacy rate. In the same year, Turkish Higher Education Council provided an opportunity to implement distance education at Turkish Universities. After these pioneering years, we witnessed a well-planned, scientific and efficient approach to the distance education in Turkey (Demiray & Isman, 2002).

Turkey has a very visible and distinguished international presence and has one of the best known distance education programs in the World. John Daniels (1995), in his book named The Mega-Universities and the Knowledge Media describes Turkey as having one of the ten largest distance education institutions in the World. Mega-universities are schools that enroll over 100,000 students each year. Countries other than Turkey having mega-universities are China, France, India, Indonesia, Korea, South Africa, Spain, Thailand, and the United Kingdom. These countries have all achieved remarkable success in increasing student numbers dramatically while lowering educational costs (McIsaac, 1996).

In November 1961, Anadolu University was given the mission to carry out distance education throughout the country. Consequently, Open Education Faculty (OEF) was organised in 1982 and 29,479 students were initially enrolled in Economics and Business Administration programs. This program used of various tools such as printed materials, television programs and face-to-face academic tutorials to reach distance education students. Later on these educational tools were extended to the use of video, computer, radio and newspaper.

Technologies used to deliver distance education programs in Turkey are typically one-way

and are designed to reach the masses. The two primary forms of distance education are the Open Education Faculty (OEF) at Anadolu University in Eskisehir and the Open High School (OHS) through the Ministry of National Education. The OEF, which been operating since 1982, delivers undergraduate degree programs and other programs to Turks throughout Turkey, Europe, and the Turkish Republic of Northern Cyprus.

The Open Education Faculty teaches mainly at university level, using print materials, broadcasts and some face to face teaching called academic counselling. The faculty prepares its own teaching materials. Print materials, that is the coursebooks are sent to students on a term basis. About 200 programmes are broadcasted on state television every year. Also there are radio programmes for language courses. When the OEF started, academic counselling was given in 22 provinces.

The other form of distance education in Turkey is Open High School (OHS) through the Ministry of National Education. The OHS is a widespread secondary education program, which has been operating since 1992. The purpose of the OHS is to allow traditional and non-traditional students, who for one reason or another have not completed secondary school, with an opportunity to earn a high school diploma. The OHS curriculum is the same as for traditional high school students. The technologies for both programs include specially designed textbooks and other printed materials including newsletters and bulletins, television and radio broadcasts; technologies for the OEF include videotapes and face-to-face lectures at universities throughout the country. Examinations for both programs are offered in a variety of locations, usually in cities and larger towns

The Internet is an educational tool of enormous potential and can be used to replace the traditional classroom lecture and to revolutionize distance education. In addition, it can be used a supplement to traditional instructional methods. The delivery of educational materials over the Internet is now almost commonplace in some of affluent developed countries and the developing countries need to enhance the delivery of high quality and effective primary, secondary and higher education to their citizens. Here, the main question is that: How can they benefit from the Internet for this purpose?

Turkey is a developing country and there have been many tendencies and attempts to integrate the Internet into Turkish primary, secondary and higher education system since 1990. The World Bank supported two projects; named "Computer Experimental School" and "Project for Globalization in Education 2000" aims were to support the Turkish formal (primary and secondary) education through distance education with the computer-mediated communication network linking. The computer companies sponsoring second project provided one year of free Internet access to project schools. But, inspite of these attempts and tendencies because of the slow working, highly bureaucratic and centralized organization of Turkish Ministry of National Education in Turkey there is no infrastructure of computer network for primary and secondary education yet, and the educational uses of the Internet are still in the start period.

According to the findings of some studies, the main problems during the use of Turkish virtual classrooms are related to current the hardware and the software and the cost constrains. The other problem are more basic, relating to skills helpful in virtual classroom.

The Turkish universities are most convenient places for the pilot distance education applications because of the infrastructure of their network facilities and the familiarity of

the students to the subjects. Although the governmental agency, The Higher Education Council's aim was to establish a virtual university in Turkey during the 2000-2001 academic year, several courses were offered on-line but sufficient data was not available regarding the effectiveness and appeal of these courses.

Utilizing Distance Education For Teacher Training In Turkey

Before we explain utilizing of distance education for teacher training in Turkey, we want to introduce the current scene in teacher education in Turkey;

The Current Scene in Teacher Education in Turkey

The main change in the higher education system took place in 1981. Before, it was made up of three different units: universities, academies of engineering and economics and teacher training colleges, which were both administratively and academically attached to the Ministry of Education. As a result of the political, social and economic problems in the 1970s, this model of higher education, like other sectors in the country, was showing signs of failure.

With the 1981 Higher Education Reform, a 'unified' system of higher education was introduced, integrating all academies and teacher training colleges into the universities. Some four-year teacher training colleges and three-year foreign language high schools were transformed into colleges of education, while the former high schools, where elementary school teachers were trained, became two-year higher education colleges. These were transformed into four-year colleges in 1989. Two-year undergraduate programmes for pre-school teachers were introduced in 1981 and also became four-year degree programmes in 1991. The responsibilities and activities of teacher training were transferred from the Ministry of Education to the universities. By making these changes, it was assumed that problems such as the quality of education, the quality and the number of staff, etc. could easily be solved. As a result of this unification and increase in the number of admissions, colleges began to suffer from a lack of physical facilities, equipment, faculty, etc. To fill the faculty gap, many faculty members of the colleges of science and letters were transferred to the colleges of education.

At present, colleges of education train pre-school, elementary school, and secondary/high school teachers employed both by the Ministry of Education and the private schools, as well as inspectors for the Ministry of Education. They are not the only providers of teachers. Students of colleges of science and letters majoring in one discipline and who follow pedagogical courses and complete their teaching certificate courses after having obtained a bachelor's degree in their field can also become teachers.

Educators who perceive educational procedures as a social system assert that this system has three main elements: students, teachers and curriculum. The efficiency of any educational system depends on the fit between these elements. If any of these fails to accomplish its task(s), there is a risk of reduced productivity within the overall educational process. Despite efforts to change the practices and current situation in teacher training, although the number of academic staff at colleges of education has dramatically increased since 1981, one cannot say that the quality of faculty has changed. This area desperately needs further study. So, it is obvious that a lack of qualified teachers in colleges of education has a negative effect on the quality of education. During the unification in 1981, many faculty members, especially from the Departments of Mathematics, Physics, Chemistry, History and Western Languages, were transferred from the colleges of letters and science, which were amongst the first colleges to be opened in

every university, to the colleges of education. Most held a doctorate and obtained an administrative position in colleges of education. The new departments or the new posts in colleges of education continued to recruit graduates of colleges of letters and science. Unfortunately, this tradition is still alive, though not to the same degree. Although these faculties were qualified in their subject, they were not trained in methodology and pedagogy. Colleges of education were graduating students who resembled graduates of colleges of letters and science. They were not graduating students who knew how to teach, but who knew their subject. Therefore, most faculty members in colleges of education, except for primary education, educational administration or instructional technology, were not producing research or writing about education. What was important for them was the subject. So, most failed to relate theory to practice and were overspecialised. They were not effective teachers. This situation still prevails, though not on the same scale, in all colleges of education. But in departments such as Arts, Physical Education, and Music, the situation differs somewhat. Selection is based on the skills and talent needed by those who will be artists, professional sportsmen, or musicians, and courses are deigned accordingly (Zülküf, 1998).

Review of the literature on the Distance Education and Teacher Training in Turkey

Hakan (1991), in his empirical study entitled "Evaluation of pre-bachelor teacher training program", evaluated the teacher training program for associate degree provided by the Open Education Faculty, using distance education system. According to the results of this study, He determined that the materials which were used in program, adequate for to learn process in distance education system and program had provided a chance for higher education opportunity for future.

Özer (1989) determined that the effectiveness of the two-year up-grading academic program (associate degree) in inducing the knowledge of educational theory and practice in the teachers enrolled in the program. In this PhD dissertation study two tests and a questionnaire were used in data collection. They were given to 428 elementary school teachers randomly selected during the academic year of 1987-1988. The tests developed for measuring the teachers' knowledge of educational theory and practice were given as a pre-test before the related courses in the program were taught, and as a post-test once these courses were taught through the media. Moreover, some personal information about each teacher in the sampling group was collected and the learning methods of each teacher were found out through the questionnaire. The statistical analysis of the data obtained from the tests and the questionnaire reveal the following:

- * There was marked increase in the knowledge of educational theory and practice of the teachers enrolled in the program. This most probably showed the effectiveness of the distance education.
- * The increase in the knowledge of educational theory and practice of the teachers was unrelated to the sex, prior educational background and teaching experience of them.
- * The teachers enrolled in the program greatly relied on the textbooks for learning and followed a few of the television and radio programs. Furthermore, it was found that most teachers sought extra tutoring and expressed a need for face-to-face consultation. On the other hand, it was unexpectedly found that the level of achievement related to the increase in the knowledge of educational theory and practice of the teachers hasn't changed in accordance with the effective use of the teaching media, the amount of extra tutoring they received, and the amount of need they had for face-to-face consultation.
- * The teachers in the program wanted further distance education programs to develop and renew their knowledge of educational theory and practice either as in-service training or degree programs.

It was also suggested that those who were successful in the in- service training programs should be rewarded in terms of better salaries and fringe benefits.

Üstünoglu (1987) proposed a model of training pre-school teachers by using distance education method. This study was prepared to develop a program model about training of candidate teachers in sufficient numbers and qualities by distance education in the aim of surpassing teacher insufficiency which is one of the problems of the system to validate education services. He defined this model as an applicative program model in which printed materials were taken as base process and a multi-media approach was appropriated.

Özgü; Açikalin and Hakan (1985) mentioned of a report on providing two year up-grading academic program by distance for the teacher who graduated from secondary school which organized by Open Education Faculty.

This report which was prepared in order to be presented to the Ministry of National Education, teachers' in-service educations which of teachers who do not have university education by using distance education was mentioned because those who work in all kinds of schools should have university degrees, according to the law 1739, as Essential Education law. It was also informed about planned teaching program, (two year up-grading academic program or associate degree) application organization and collaboration between sources and institutions. By this way two-year university education would given to teachers.

In the report it was given place to determining of sufficiencies of present teachers and necessities; how and which restrictions were needed for operating on printed materials, radio-TV course programs and face-to-face education circumstances, and detailed information about organization. The report was supporting that after the completement of teacher training program, nearly 130.000 elementary school teachers who were graduated from secondary schools in Turkey would provide benefit and help to our society in educational, legal and burocratic respects.

Yüksel (1987) and Yüksel (1990) evaluated the radio and TV programs which were produced by OEF from points of teachers view in distance teacher training and determined that these technologies were not used effectively by teachers; because broadcasting hours of programs were not appropriate and teachers did not know anything about using the radio and TV in distance education.

The aims of some studies (Çelik, 1996; Yasar, 1996) were to propose a model for distance teacher training in Turkey. Celik (1996) examined the opportunities of utilizing the distance education models for the aim of in-service training the teachers and concurrent to their services. He determined that Turkey need to train the teachers which could be successfully applied the educational technologies.

Yasar (1996), firstly, introduced the computer-mediated communication technologies and examined the use of these technologies for in-service training in Turkey and, then, proposed a pilot model for in-service teacher training in Turkey. According to Yasar (1996) one example of a good use of distance education for in-service teacher training was in the area of elementary school education and it was very important to update the education of elementary teachers in Turkey. He proposed that 4 existing distance education centers

where Internet access was relatively inexpensive, and readily available, could be used for the pilot teacher in-service project utilizing CMC technologies in distance education. The initial program would provide inservice to elementary teachers in the areas of Foreign Language, Science, and Social Studies. For the Computer-Mediated Distance Education Inservice Program, totally 140 teachers at a time from the four geographic areas would participate in the pilot project for a period of one month in each location. A three month period would accommodate three of the one-month training periods, training a total of 420 teachers a year during summer sessions. During the winter vacation one session could be repeated resulting in a total of 560 elementary school teachers being trained per year in the use and application of new technologies to the classroom. This pilot project would be followed up with similar training sessions in other provinces where Anadolu University Open Education Faculty has centers as the Internet access becomes available.

Evaluation of the Applications and Literature In Turkey

In Turkey, in 1985-86 and in 1990 began two distance teacher training program; the first program was a pre-Bachelor certificate for 130.000 primary school teachers and the second program offered a university degree to 54.000 secondary school teachers (Demiray, 1990).

The national literature and applications showed that the teachers wanted further distance education programs to develop and renew their knowledge of educational theory and practice either as in-service training or degree programs. We see that the pre-Bachelor certificate program for primary school teachers was more effective and widespread than the second program offered an university degree to secondary school teachers.

Teachers could not use ,effectively,the one-way technologies of distance education such as radio and television. Because, firstly, they did not know anything about using the radio and television in distance education and the broadcasting hours of these programs were not appropriate. Although the most common technology of distance education in the world is Internet, we can not say that Internet was used, effectively, for distance teacher training programs in Turkey. We see only several proposed models on distance teacher training in the national literature.

The World Bank supported project, called the "Project for Globalization in Education 2000" began a very important step for the Turkish Educational System. The aim of this project was to use instructional technology in each level of the education system to be able to create a society with adapted information and technology standards. Through this project, new computer labs were established in 2,451 primary and secondary schools in 80 cities and 921 towns in Turkey. In each of these schools the technology class rooms were equipped with: Computers, Printers, Scanners, Office program, Courseware for Computer literacy, Courseware for different subjects, Educataiment (education + entertainment) courseware, Electronic references, Video, overhead projectors, TV, educational videocassettes, and transparencies (Akkoyunlu & Orhan, 2001, 29-31). Some basic principles of this project were to support formal education through distance education and to make teachers computer literate.

Discussion

Distance education technologies can be classified as one-way non interactive and two-way interactive technologies. Developed countries use two-way interactive technologies in distance education and the tendency in the world about distance education is to pass from single-mode that doesn't allow student-instructor interaction to the multi-mode that has important interaction elements. The point that is reached in the subject of distance education is the interactive education that is served through world wide web(WWW) or videoconference through Internet.

Because of the speed with which distance education was conceived and implemented

there have been problems not unlike faced by other developing countries. Technologies used to deliver distance education programs in Turkey are typically one-way and she integrates technologies in distance education primarily by combining the one-way technologies of text and television. The some other problem areas of Turkish distance education system are the following; The budgetary restrictions which confront all developing countries; lack of resources; lack of projects; lack of in-service training on the recent uses of current technology.

Although there have been many tendencies and attempts to integrate the Internet into Turkish, primary, secondary and higher education since 1990, because of the slow working and highly bureaucratic and centralized organization of Ministry of National Education (MONE) there is no infrastructure of computer network for primary and secondary education yet, and in Turkey, the educational uses of the Internet are still in the start period.

Distance education offers pre-service and in-service teachers with both skills training and an opportunity to complete teacher training programs or degrees. The proliferation of teacher training programs via distance is limited neither to developed or developing countries, nor is it limited to specific delivery methods. This proliferation is the result of rapidly developing telecommunications technologies coupled with an increasing awareness of the ways to use the technologies for teacher training.

In Turkey, in 1985-86 and in 1990 began two distance teacher training program; the first program was a pre-Bachelor certificate for primary school teachers and the second program offered a university degree to secondary school teachers. But the second program was more widespread and effective than first.

Compared with other developed countries from the point of utilizing distance education for teacher training, we see that Turkey is still at very early stages and although Turkey considers itself part of the European community, its problems concerned with distance education and teacher training place it rather with its Asian neighbors.

Although Turkey faces problems, such as lack of resources, the budgetary restrictions, lack of in-service training on the recent uses of the current technology, similar in scale to other developing countries, it has had large scale and successful experience with distance education. Distance education can provide continuing education to practice teachers in all settings. Distance education can adress the shortcomings of conventional education. Teachers can use the Internet to gather information.

By using distance education technologies and possibilities Turkey can solve teacher training and other instructional problems and continue to assist in the modernization of Turkey. Despite of the insufficiencies and restrictions on the using of distance education technologies in teacher training, Turkey should seek new ways to use distance education technologies for teacher training in the most cost effective way.

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