

Distance Education

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The Definition and Importance of Distance Education

In today's world, with the development of science, new technologies have entered into our lives. These technological developments are rapidly changing the environment of education and training. In the field of education and training, time and place boundaries have begun to disappear. Thus, distance education entered the literature and took its place in the education systems of countries (Keegan, 2005). Today, distance education has an important role in the education systems of countries. This role is vital both for its own citizens and for foreign countries. The following features of distance education, which has taken its place in the basic education policies of many countries for many years, draw attention.

- Lifelong learning
- Use of technology in education
- Providing of training at affordable costs
- Individualization of educational activities
- Having the training at the desired time
- Dignity parity for men and women
- The prestige parity of qualified and higher education
- The globalization of education (Keegan, 2005).

Considering these properties of education, various definitions of the concept of distance education, which are realized through correspondence in the past and with advanced technologies today, are made. Simonson and Schlosser (2002) define distance education as a formal education in which the learner and the teacher are in separate places, but in which students, educational resources and teachers interact through interactive telecommunication systems. This definition consists of four main components. The first concept is that distance education is institutionally. The second component of the definition of distance education is the concept of separation of the teacher and student.

Generally, separation is thought of in geographic terms - teachers are in one location and students in another. Interactive telecommunications is the third component of the definition of distance education. The interaction can be synchronous (simultaneously) or asynchronous (at different times). Interaction is critical, but not at the expense of content. In other words, it is important that learners be able to interact with each other, with resources of instruction, and with their teacher. Finally, is the concept of connecting learners, resources and instructors. This means that there are instructors that interact with learners and that resources are available that permit learning to occur. Resources should be subjected to instructional design procedures that organize them into learning experiences that promote learning, including resources that can be observed, felt, heard, or completed. Briefly, the definition of distance education includes these four components. If one or more are missing then the event is something different, if only slightly, than distance education. (Simonson & Schlosser, 2002).

<p>Institutionally Based on</p>	<p>The separate of Learner and The Teacher</p>
<p>Interactive Telecommunication</p>	<p>The sharing the data,voice, image Learning Experienaces</p>

Figure 1. Four Components of Distance Education Definition (Simonson et al., 2008)

Unesco (2002) has defined distance education as an educational process in which a significant part of education is carried out separately in terms of space or time. Distance education is a planned learning method that normally takes place in a different place than face to face education. For this reason, a course design carried out with distance education requires special techniques, individual teaching techniques, special electronic and technological communication methods, and special organizational and administrative arrangements (Moore & Kearsley, 1996). According to Bates (2005), distance education is less a philosophy and more a method of education. Students can study at the time when they want, in the place where they prefer, and without meeting with a teacher face-to-face. For example, they can study and learn something new at home, at work, at school, in the library or in a study center with a technology tool. Here, technology is a critical element of distance education. It is important to use tools such as satellite, video, sound, graphics, computer, multimedia technology in distance education. In this

education system, the use of electronic tools or written materials and similar materials is the basic approach to reach students.

Rıza (1997) defines distance education as activities carried out by systematically using specially prepared written, visual, mass communication programs and short-term face-to-face teaching regardless of the age, time, place, method, objectives and limitations of traditional education. According to Uşun (2006), distance education is a planned and systematic educational technology application which the teacher and the students are in separate environments in most of the learning-teaching activities; which the opportunity for “individuality”, “flexibility” and “independence” are provided for the recipients in terms of teaching age, goals, time, place and method, etc. ; which materials, tools and technologies and methods such as written and printed materials, audio and visual tools, technologies, face-to-face education are used in learning-teaching processes; which the communication and interaction between the source and the receivers are carried out with interactive integrated technologies. Özkul and Aydın (2012) on the other hand, open and distance education is the learning process, which learners are distant from each other and learning resources in terms of time and space; which their interactions with the students and learning resources are based on distance communication systems.

When the literature on distance education is examined in general, although there are many definitions of distance education, there are common points in the definitions. It is noteworthy that distance education is an institutional-based formal education process, learners and teachers are separated in space and time, specially designed study materials and teaching methods are used in this education system, new technologies are used to connect students taking distance lessons, teachers and institutions and to provide two-way communication as well as facilitating teaching and learning. Keegan (2000) analyzed each of the definitions of distance education and revealed five basic features of distance education. These features are listed as follows:

- During the learning process, the teacher and the student are in different places.
- The influence of the educational organization is vital, both in the planning and preparation of learning materials and in the provision of student support services.
- There is a need to use printed, audio and visual tools to convey the content of the course to the learners by providing communication between the teacher and the student.
- It is necessary to provide two-way communication in order that the student can start learning activities.
- The learning process takes place in the form of individual learning rather than

group learning that occurs in face-to-face education.

One of the important factors affecting the development of today's societies is education. Therefore, countries all over the world have to give their students in primary, secondary and higher education by using the best educational activities. On the other hand, it has to take care of providing education opportunities in various ways to individuals who cannot continue their education at any school level and to the personnel who are on the job (İşman, 2011). Since it is very expensive to reach all citizens of a country through face-to-face education, it has to reach them with cheaper tools and methods. In our age, the most important method to meet this need is distance education (Kaya, 2002).

Distance education is not a simple system or component. Converting an institution to distance education or creating a new distance education institution means making significant changes in the use of teaching resources. While doing this, politicians and experts should carefully consider how and why they will implement this system (Moore and Kearsley, 2012). These responsible people should establish the philosophical foundations on which distance education is based, and put the principles and methods of the system into practice (Biao, 2012). Moore and Kearsley (2012) explain the importance of distance education with the following sentences:

- With distance education, it is possible for people of all ages to access education and learning activities.
- With lifelong learning, people update their professional knowledge and contribute to their individual development.
- It is ensured that the cost of scarce educational resources is reduced.
- The quality of existing education structures is improved.
- Large masses are reached by increasing the capacity of the education system.
- Inequalities between age groups are eliminated. With this system, all age groups are reached.
- It is ensured that educational campaigns reach certain target audiences.
- The developments in new subject areas are followed and the training and teaching capacity is increased.
- It contributes to the integration of education with work and family life.
- An international dimension is added to educational experiences.

Since there is no time and place limit in distance education, individuals can access

unlimited resources whenever they want, they can get online or offline education with the tools they want. For this reason, time, duration and place limitations are eliminated in distance education (Kılınç, 2015). Since the student is in an independent state, he determines the organization, place and time of teaching activities in line with his own interests and needs. In particular, individuals choose learning-teaching activities in a way that they can learn on their own. Thus, personal learning needs are met (Arat and Minister, 2011).

Today, formal education is insufficient to meet the educational needs of individuals. In this case, distance education emerges as an alternative and sometimes as a complement to formal education. In particular, students' repeating the subjects they cannot understand at school, accessing additional resources by using information tools such as printed texts, TV broadcasts and other audio-visual tools reveals the necessity of distance education (Tirnovalı, 2012). In this context; the student enables autonomous learning by making use of different sources, by reach to different people, by making his own personal learning plan and improving his self-direction capacity (Moore & Kearsley, 1996).

The most important requirement of distance education is that it makes educational activities possible for individuals who cannot benefit from formal education due to cultural, religious, political, war and immigration reasons (Weimin, 1999). On the other hand, it gives the chance to continue their education to individuals who leave any level of formal education for various reasons. In order to solve this situation, countries support their distance education infrastructures and provide the course materials of their citizens free of charge (Tirnovalı, 2012).

Today, since high-tech informatics and electronic tools are used in distance education, it is possible to reach thousands of people at the same time, to meet, to perform teaching activities and to interact (Balaban, 2012). As a result, virtual classrooms are created, web services are provided, open education high schools and open education faculties are established. In this case, the education expenditures of the countries decrease and they achieve their educational goals at a more affordable cost (İşman, 2011).

Adults have to give importance to their personal and professional development in order to meet their individual needs throughout life. Therefore, individuals participate in various courses, vocational and educational programs throughout their lives in order to keep their professional knowledge up-to-date and improve their personal development (Gökkaya, 2014). These educational activities are carried out through distance education as well as non-formal education institutions. Thus, these in-service training activities carried out with modern methods are inexpensive for both the employer and the individuals and they are organized at a convenient time for the individuals (Duman, 2019).

Historical Development of Distance Education System

Although distance education seems to be an advanced system today, it has a history of 150 years (Kaya, 2002). The origins of the techniques and some of the most important ideas we use in distance education today based on events that took place in the world more than a century ago. Many developments, different inventions, ideas and practices taking place in different parts of the world have contributed to the development of distance education (Moore & Kearsley, 1996). Thus, distance education went through various stages in parallel with the development of technology until it reached its modern level. Today, distance education is widely used in different countries of the world (Moore & Kearsley, 1996).

Moore and Kearsley (1996) divided the history of distance education into five important phases, depending on the communication environment and the developments in communication technology that made it possible to use new tools and equipment. We can also describe this development as a generation. These five generations are as follows:

1. Correspondence
2. Radio and television broadcasting
3. Open universities
4. Teleconference
5. Internet / web

1. Correspondence

Distance education via correspondence relied on printed or written text as a means of communication. Courses were sent to students via letter. At periodic intervals, students wrote their assignments and sent them to the teachers. Teachers were giving feedback by commenting on assignments and sending the assignments back to the student. The technology used was limited. Correspondence materials were printed and reproduced. Postal service was used as a way of communication (Kember, 2007). The chronological order of distance education applications via correspondence carried out in the world is given in Table 1.

Table 1. Chronological Order of Distance Education Applications Via Correspondence in the World

The Date	Distance education applications via correspondence
1833	The first distance learning by letter took its place in history with an advertisement titled "Composition by Mail" published in a Swedish newspaper.

1840	In England, Isaac Pitman, a stenographer, began teaching shorthand by letter in Bath. In this training, the achievements of the students were also evaluated with a grade.
1843	Three years later, this training was formalized with the founding of the Phonographic Correspondence Society, pioneered by Sir Isaac Pitman.
1856	The first institution to teach languages through distance learning in Berlin was founded by Charles Toussaint and Gustav Langenscheidt in Germany.
1873	After Anna Eliot Ticknor encouraged the society to study at home, a Boston-based distance learning activities spread across the Atlantic. Thousands of students were reached with guidance studies, test-solving and reading activities.
1878	In 1878, Skerry's College was established in Edinburgh, which was engaged in Correspondence studies.
1883- 1891	Students who completed the required institutes and correspondence courses were awarded academic certificates by the state of New York through the Chautauqua College of Liberal Arts. The summer courses continued effectively.
1887	Many correspondence institutions were established, such as the University Correspondence College in London.
1891	Thomas J. Foster, editor of the Mining Herald, a daily newspaper in eastern Pennsylvania, began teaching a correspondence course on the prevention of the mining and the mine accident.
1892	The University of Chicago established departments offering distance education at the undergraduate, graduate, and doctoral levels.
1898	Hermod founded International Correspondence Schools, a commercial school under his own name, one of the largest and most influential distance learning organizations in the world. This was a high school which practiced by Correspondence and had thousands of students.
1920	Curriculums started to be developed in secondary schools providing distance education.
1926	Michigan offered vocational courses to students in Benton Harbor through distance learning by Correspondence.
1932	The University of Nebraska offered its first distance education courses with correspondence in high schools.
1939	In France, the Ministry of Education established the correspondence-teaching college in response to the impending World War II.

(Adapted from Simonson et al., 2008).

The target groups of this period, in which distance education efforts took place with correspondence, were adults with professional, social and family commitments. The target groups of this period, in which distance education efforts were made by letter, were adults with professional, social and family commitments. This remains the main

target group today. The aim of distance education is to broaden the intellectual horizons of individuals, to improve their professional knowledge and to inform them about current developments. Moreover, individuality and time flexibility in education through correspondence were important considerations (Simonson et al., 2008).

2-Radio and Television Broadcasting:

Radio or television is a form of one-way communication used as a broadcast medium. Radio and television broadcasting has been a significant informal learning tool. The reason why these communication tools are preferred is that although they are expensive broadcasting tools in the first years, they are cost-effective in later years and have the opportunity to reach many people (Kember, 2007).

All over the world, distance education institutions have used radio and television to broadcast distance education courses. Many countries have started to provide distance education programs on their own national state radio and television over time and have had the opportunity to reach their citizens living in different geographical regions (İşman, 2011). Distance education applications carried out through radio and television are given in Table 2.

Table 2. Distance Education Applications Carried out Through Radio and Television

The Date	Distance Education Applications via Radio and Television
1895	Radio technology was invented.
1910	Radio broadcasts started broadcasting in the USA, and started to make licensed programs 2 years later.
1916	Distance education courses were given at the University of Wisconsin in the USA. Students completed their lessons by listening to the radio at certain times of the day.
1920	By establishing radio stations in the USA, distance education courses became widespread and reached large masses.
1920	In 1920, the British Ministry of Education supported education with radio lessons, and the state’s official radio began teaching activities with BBC radio programs.
1929	China supported the distance education system through radio and contributed to millions of people by giving distance education courses.
1930	Radio was used in distance education systems in Canada and Australia.
1932	In the USA, television channels started to implement distance education programs at the state universities of Iowa and Kansas.
1938	In the USA, lecture presentations began to be made on television.
1945	John W. Studebaker established the first educational television.

1950	Colleges and universities started to establish educational television stations and became widespread in educational institutions.
1957	New York University designed educational programs in collaboration with the CBS television company.
1961	Japan, Russia, Czechoslovakia, Hungary used the distance education system at the university level through television for the first time.
1966	The French Ministry of Education carried out its educational activities through television.
1980	Many countries in the world have expanded their distance education programs with their national radio and television channels and established radio and TV channels only for distance education. In this way, they have continued to reach millions of people.

(Adapted from İşman, 2011; Simonson et al., 2008).

3-Open Universities

Open universities are quite different from the other four generations in that they did not arise due to the development of a particular communication medium. Instead, it is characterized by the use of a combination of media and supporting services. The defining feature of the distance education model, which includes the use of open-circuit broadcasting, is a package of course materials, which is the main means of conveying knowledge to the students (Kember, 2007).

Today, distance education in open universities has reached a higher standard of educational design and has become a multimedia package rather than purely print-based. The open university model is also an important development as it offers much more than a network of supporting materials and advisory services for correspondence work. In time, the use of communication technology has also increased to provide support for the educational studies (Kember, 2007).

The UK Open University, the world's first open university, was established in the UK in 1969. In addition, distance education was given at South Africa University and at various universities in Japan and Australia. The universities in these countries have achieved great success and established open universities (Moore & Kearsley, 1996). Today, there are millions of people who receive distance education in open education universities in different countries all over the world (İşman, 2011).

4.Teleconference

The most important defining feature is the use of telecommunication channels for the instructor and students to interact. The most important feature of this system, which is closer to traditional primary teaching, is that the students listening to the lesson are

not physically present in the classroom, but are connected via a teleconference channel (Kember, 2007). The teleconferencing system was first used in the 1970s and 1980s. Unlike radio and television broadcasting, there is a two-way communication. The teacher communicates with the student at the same time, even though they are in different places. He gives feedback by having interaction with the student (Moore & Kearsley, 2012). This system has gained four different teleconferencing features over time. The teleconferencing system developed with the technologies which include sound, audio graphics, video and computer units and became widespread all over the world (Moore & Kearsley, 1996).

5. Internet / Web

Fifth generation distance education is internet and web-based teaching. In the late 1980s and in the early 1990s, the development of fiber optic communication systems allowed the expansion of live two-way communication. High quality audio and video systems were developed. Thus, computer and internet technology became widespread all over the world (Kember, 2007).

Distance education opportunities increased rapidly thanks to the use of computers and the internet.

In the mid-1980s, the universities started to offer credit and non-credit courses online (Moore & Kearsley). Today, in most cases, the teacher organizes course materials, readings and assignments online. On the other hand, the students read course assignments, watch videos, listen to recordings, complete their homework, and participate in online discussions with other classmates (Simonson et al., 2008).

Computer networks are an easy way to supply course materials to students around the world. Now, many lecturers and teachers use the useful interface of the World Wide Web to make course materials available to their students (Moore & Kearsley, 1996). In addition, Massive Open Online Courses (MOOCs) are well-designed and college-level courses for anyone who want to enroll online. Today, MOOC courses are huge, often tens of thousands of people enroll in this system. Later, individuals can participate in MOOCs online and offline (Simonson et al., 2008).

Historical Development of Distance Education System in Turkey

Scientific and technological developments in the world in the last century have affected the education systems of countries. In the rapidly developing world, countries have taken measures for their own people to follow these developments and to benefit from this knowledge whenever they want (Balaban, 2012). In order to achieve this goal, face-to-face education was not enough for people and they had to resort to distance education.

Because, in order to reach both young and adult populations, it has become necessary to reach large masses with various technological communication tools that eliminate the problem of time and place (İşman). In this context, Turkey, like many countries in the world, did not remain indifferent to this situation and carried out a series of necessary studies. But; It took a long time to establish, develop and disseminate distance education systems in our country (Şahin, 2017).

In light of the event and important developments, Bozkurt (2017) classified the developmental periods of distance education in Turkey into four periods: 1-Conceptual period, 2- Correspondence, 3-Radio-television, and 4-Internet-Web. While determining these periods, developments in the fields of technology and education and the regulations and laws that were put into practice in Turkey were taken into consideration.

1. Conceptual Period (1923-1955)

This period covers the period when the discussions and suggestions about distance education were made in Turkey. In this period, the Republic was established and the law of unification of education was put into practice in 1924 and education activities was guaranteed by law for everyone to benefit from. It is aimed that all citizens are literate with this educational law (İşman, 2011). It was suggested that John Dewey, who came to Turkey in the same year, should use letter teaching in the training of teachers. Thus, even if it is only a suggestion, some steps were taken for the first time to benefit from distance education (Kılınç, 2015).

In 1927, problems related to education were discussed in the Grand National Assembly of Turkey, and the idea of distance education was put forward by Mustafa Necati Uğral, the Minister of National Education. In this session, the use of distance education in order to increase the literacy rate of the people was discussed. But; it could not be put into practice since the literacy rate was very low in the current period (Şahin, 2017). As a result of various researches carried out in 1933, the idea of implementing correspondence teaching courses were put forward by taking into the consideration the conditions of the country. In 1939, the National Education Council held a meeting for the first time, and the idea that distance education activities could be carried out besides the formal education began to dominate (İşman, 2011). In 1941, in order to train villagers living in rural areas, 'Agricultural Calendar' and 'Home Hour' programs were put into practice in order to meet the educational needs of women (Bozkurt, 2017).

After 1950, more concrete projects were proposed on distance education projects. In 1950, Ankara University Banking and Commercial Law Research Institute suggested using distance education methods in education (Kılınç, 2015). The Educational Films Center was established in 1951 and the establishment of technology in the education system was the beginning of an active process in distance education (Bozkurt, 2017). In

1952, radio broadcasts began to be made in Istanbul to support agriculture and animal husbandry for farmers (İşman, 2011). At the end of 1953, FONO foreign language courses were put into practice for the first time by correspondence and as a distance education method.

2. Correspondence (1956-1975)

In this period, distance education studies have ceased to be a suggestion and an idea, various implementations have been made in our country through trial and error. The foundations of institutions serving today were laid. However, the desired success could not be achieved due to political instability and inadequate infrastructure (Bozkurt, 2017).

In 1956, Ankara University, Faculty of Law, Banking and Commercial Law Research Institute started the distance education practice in Turkey. With this application, it is aimed to give training to the employees in the bank by correspondence. Bank employees were sent instructional materials about banking (Şahin, 2017). In 1957, the 6th Education Council was held and the subject of non-formal education was discussed in detail, and suggestions were made about the aims, principles, methods, tools, implementers of the system and the audience it would address. After this meeting, there was an increase in distance education implementations (İşman, 2011).

In 1958, an important development occurred in the Turkish education system. A correspondence Teaching Center was established under the Ministry of National Education. Courses were given by correspondence to those who wanted to finish school from open education (Bozkurt, 2017). In 1961, the Ministry of National Education, the Undersecretariat of Vocational and Technical Education established the “Correspondence Teaching Center “ to carry out studies on teaching various technical subjects by Correspondence. With this system, it has started to offer various courses to give students a certificate of authority (Kırık, 2014). Later, the programs of all departments of Three-Year Education Institutes, the Girls’ Technical Higher Teacher Training School, the Boys’ Technical Higher Teacher Training School, and the Commerce and Tourism Higher Teacher Training School were put into effect. These programs had approximately 50 thousand students in the 1974-1975 academic year (Kaya, 2002). Correspondence Teaching Center was affiliated to the Non-formal Higher Education Institution, which was established in 1975 with the approval of the Ministry. The aim of the Non-formal Higher Education Institution (NHEI /YAYKUR) is to train individuals who are needed by our society for students who have graduated from high schools or equivalent schools and cannot enter an undergraduate program (Şahin, 2017; İşman, 2011). The aim of the Non-formal Higher Education Institution (NHEI/YAYKUR) is to educate students who have graduated from high schools and equivalent schools, but who do not have the opportunity to enter a higher school and undergraduate program, as individuals needed

by our society in line with the development plans and goals of the state (Şahin, 2017; İşman, 2011).

In 1962, the training unit was established with Radio. In 1964, educational broadcasts began to be made in a planned manner with the radio channels of the Turkish Radio and Television (TRT). In 1974, in parallel with the developments in technology, TRT opened different radio channels. In addition, TRT 1 started to broadcast education, TRT 2 started to broadcast culture, and TRT 3 started to broadcast music broadcasts. In addition, “School Radio” and “Foreign Language Lessons” programs were put into practice to support formal education in cooperation with the Ministry of National Education (Bozkurt, 2017).

3. Radio, Television (1976-1995)

This period is a period in which the maturation of distance education studies accelerated in Turkey and distance education applications became widespread in primary, secondary and higher education. This is a period in which audio-visual technologies are used besides the printed materials. It is a period when education programs for the interests and needs of individuals became widespread by putting into practice the efforts to ensure the equality of opportunity of the citizens (Bozkurt, 2017).

In 1968, the name of the Letter Education Center was changed to the Radio and Television Education Center after the widespread use of radio and television in the country. In 1982, this institution was called as Information Center due to the use of modern tools in education (Kırık, 2014). In the 1980s and 1990s, the School radio and TV school, which served in schools affiliated to the Ministry of National Education, carried out activities supporting formal education and non-formal education (Bozkurt, 2017).

In the 1980 constitution, with the regulations made in 1981 and 1982, the right to lifelong education and open education was transferred to the higher education institution and Anadolu University. In the academic year of 1982-1983, Anadolu University, which has been using distance education applications since 1970 and has academic and technological infrastructure, started distance education programs in the field of Economics and Business Administration (Kaya, 2002). In 1986, Anadolu University organized distance education activities for Turkish citizens living in Western Europe. In 1991, Fırat University started to organize educational activities by establishing a television station within its own structure. In addition, in the same year, it gave graduate students the opportunity to complete their education via e-mail service (İşman, 2011).

1992, the Ministry of National Education established the open education high school. Thus, people who could not continue their high school education due to various reasons were given the opportunity to complete high school and receive a diploma. Open education

high schools, which have been operating according to the passing and credit completion system in field and culture courses since 1992, were transformed into multi-program high schools that implement vocational education in the 1995-1996 academic year. In this context, the Ministry of National Education provided course materials support to the students and Turkey Radio Television (TRT) also supported the students by offering various educational programs for these students (Bozkurt, 2017; Kaya, 2002).

4. Internet-Web (1996-Present)

It is a period in which information-based education activities are active. In this period, the use of audio-visual learning contents, tools and learning environments became widespread in distance education activities. In addition to the use of one-way tools in learning processes, two-way interaction and communication has been realized (Bozkurt, 2017). In the learning processes, two-way interaction and communication were realized besides the use of one-way tools, (Bozkurt, 2017). In this process, many public and private institutions have started to train their own personnel, give private lessons to students and organize educational activities. The use of multimedia, video, videotext, interactive video, telefax, teleconference systems, educational technology laboratories, teaching machines, robots, databases has become widespread in distance education (İşman, 2011).

An important development in this period was the establishment of the Open Education Primary School by the Ministry of National Education in 1997. Those who have completed the age of 15 and those who have left the 6th, 7th, and 8th grades of primary education have benefited from this distance education system. In the same year, Vocational and Technical Open Education School was established. The purpose of these institutions is to prepare individuals for life by providing them with a profession by giving face-to-face training when necessary (Bozkurt, 2017).

Today, universities have started to establish distance education centers (DEC) by preparing the necessary technological equipment and infrastructure. Many universities have started to offer certificates to their students by giving various courses and lectures via e-learning. In addition, most universities offer diplomas by opening associate degree, undergraduate, graduate and doctoral programs to their students through distance education. In recent years, Anadolu University has given the public the opportunity to complete a second university. In summary, many universities develop projects to continue their educational activities with information technologies (Bozkurt, 2017; İşman, 2011).

In Turkey, distance education activities at the basic and secondary education level have accelerated with the implementation of the FATİH project. Therefore, parallel to the developments in the world, the Ministry of National Education has made new initiatives. In 2010, the Ministry of National Education, in cooperation with the Ministry

of Transport, initiated the project called “Movement to Increase Opportunities and Improve Technology”, known as FATİH in short in Turkish. (Kayaduman et al., 2011). FATİH Project in Education was initiated for the effective use of technology in lessons in order to provide equal opportunities in education and training by improving technology in all schools all over the country. Information technology tools are arranged to appeal to more sense organs in the learning-teaching process in the classrooms and at the other parts of the school. The students have access to millions of written, audio-visual content both inside and outside the school, and online lessons are given by teachers thanks to the Education Informatics Network (EIN) established by the Ministry of Education. During the pandemic, which has had an impact all over the world, online courses were held all over the country through EIN. In this context, many course materials have been made available to teachers and students. In addition to the opportunities provided to students with the FATİH project, it provides the opportunity to organize face-to-face and distance in-service training activities for teachers (YEGİTEK, 2020).

Distance Education Examples in the World

In this section, it will be focus on the distance education system of the UK, China, India and Australia. There are several reasons why we consider these countries. The main reason why we consider the distance education systems of the countries named above is that the open universities in these countries reach very large masses through distance education. According to Qayyum and Zawacki-Richter (2019), the number of students enrolled in open universities in these countries as of 2019 is as follows:

Table 3. The Number of Students Enrolling in Open Universities in Australia, China, India, England as of 2019

Country	The number of students enrolled in open and distance education
Australia	261 000
China	6 450 000
India	4 200 000
England	173 000

There are two important reasons why we consider the distance education system in Australia. The first is that Australian universities are at the forefront of promoting the use of open educational resources (OER). The country’s leading universities, such as Charles Sturt University, the University of Tasmania and the University of Technology, and the Higher Education Board of the Australian Government’s Department of Education and Training (Student Information and Learning Department), are developing a National Roadmap to support distance education policies. Another reason for choosing this country is that Australia has the students online courses at the level secondary and high school. Open and Distance Education Institutions in Ausralia provides online courses

simultaneously for those who cannot attend primary and secondary school due to geographical reasons, those who have to travel nationally or internationally with his family in the long term, those who enroll in a full-time school but cannot take the courses they want as they continue artistic and sports activities, and those who have a long-term illness (SIDE, 2020).

The reason why we examine the distance education system in China and India is that they are the two most populated countries in the world. The population of China is 1,439,254,046, and the population of India is 1,380,004,385 (Wikipedia, 2020). It is a matter of curiosity that these countries, which have a large population, provide education and training services to all citizens through distance education. Because, the distance education network established to reach such a large population will cause high costs and require a great deal of effort. That these countries use the technological infrastructure and networks to deliver educational activities to their students and citizens will also be a guide for us in the future educational work.

In Europe, distance education has made significant progress in recent years. In distance education activities, England has an important place in addition to countries such as Germany, the Netherlands, Portugal and Spain. Europe is one of the places where the trend towards dual mode service delivery (part-time face-to-face, part-time distance learning) is most evident. This trend is also strongly highlighted in the UK, where most universities now run distance learning programmes.

The prominence of these distance education programs is due to the individual initiatives of faculties or departments. In the UK, undergraduate and postgraduate education programs given by distance education to people other than their own citizens are also very common (Harry, 1999). For this reason, in this study, the widespread use of distance education at undergraduate and postgraduate level in the UK, a European country, will support better elaboration of the research subject.

Distance Education In The United Kingdom (UK)

Distance education in England is conducted by the Open University of England, which was established in 1969, which provides education to large masses. This university had of great importance in terms of being the first institution in the country, coming to the fore with its special structure and working methods, and being recognized internationally (Peters, 2006). The headquarters of this institution was opened in the town of Milton Keynes in January 1971. The main purpose of this institution, which is not an academic prerequisite for enrollment in the Open University, is to provide educational opportunities to everyone. The education of this university was carried out with courses organized centrally by a distinguished faculty, television, correspondence, study groups and courses and seminars held in different geographical centers of England and various

activities. However, correspondence supported by television lectures and seminars was used as a basic educational technique in distance education (Britannica, 2020). In 1983, the doors of the Open University Business School, which today is the largest business school in Europe, were opened. In the 1990s, distance education became widespread, with new fields of study and new undergraduate programs opening, including law and modern languages in Open university UK (Open University, 2020).

Today, the Open University of England offers undergraduate and postgraduate degrees. In addition, more than half of higher education institutions offer various online and offline courses via the internet at associate, undergraduate and graduate levels (Open University, 2020). Through the open university, teachers are provided with in-service training courses and school-oriented courses for self-development as well as individual study packages. In addition to individual study packages, different courses are given to health and public employees to update their technological knowledge. The common goal for distance education is to focus on professionals who want to recertify, employees who want to update their job skills, people with disabilities and active military personnel (Encyclopadia Britannica, 2020).

The UK does not have national policies regarding distance education for other states to benefit from. However, there are a number of factors and policies on distance education for its own people. Due to the immigration problem, universities have encouraged international students to attend distance courses that they can complete in their home country (Open University, 2020).

The British Accreditation Council, Quality Assurance Agency (QAA), which is responsible for the quality assurance of the higher education sector, does not make a distinction between face-to-face education on campus and distance education (Boamong & Holmberg, 2015). The Open University deals with some of the important issues facing the world today, informing the public and politicians, and encouraging discussion and participation on questions of global importance. Thus, the Open University of England continues its educational activities worldwide with the quality of education (Open University, 2020).

Distance Education in China

With the advancement of science and technology in the People's Republic of China, it has given great importance to distance education and has made significant developments recently. Working adults, school leavers and some disadvantaged groups want to continue their education and the government wants to reach these people; aiming to deliver education to remote, mountainous, rural areas where the economy, science, technology, education and culture are underdeveloped; the desire to reduce costs; providing training in the professional fields of personnel working in different institutions and pre-service

people constitute the reasons why China gives importance to distance education. (Harry, 2003; Moore & Kearsley, 1996).

Distance education in China is carried out in three different ways: 1- Distance education by correspondence letter 2- Radio and TV education 3- Self-study. By correspondence distance education activities are offered as a two-way service by a small number of colleges and mostly regular higher education institutions. Beijing Post and Communication Institute, the country's higher education institution, carries out distance education activities by correspondence in the country. Today, China Radio and TV University (RTVU), which is a mega university, continues its distance education through Radio and TV. Distance education through self-study is carried out part-time in the form of state exams in a certain time. This education is not an institutionalized education with full teaching, learning support and student management functions, but a system of examinations conducted by the government (Harry, 2003; TUENA, 1997).

In the People's Republic of China, important developments occurred in the distance education system in parallel with the technological developments that took place in 1979 and 1988. In 1988, a giant step was taken in establishing a modern large-scale distance education system, as Satellite TV offered a cost-effective method of communication. Thus, China has established a highly structured system for distance education. This system, as central and local has been established at five levels: the State Education Commission, the Provincial Education Commission, the Governor's Office of Education, and the District Education Office, (Moore & Kearsley, 1996).

At the first level, China Radio and Television University (CTVNC) was established and given under the responsibility of the State Education Commission (TUENA, 1997). This is a national central university as the name suggests. It consists of 28 regional Radio and Television Universities in the states to enable it to spread educational studies throughout the great country.

The system of these distance education universities work with three structural aspects :departments in the provinces, which are closely connected to the government administration, study centers in the districts, and local television classrooms. Currently, this distance education university has three kinds of the student groups. These groups consist of people who want to receive undergraduate education in full-time employment, secondary school graduates at the university, and those who quit their education before due to various reasons and restart to complete their education. With all these students, this university has a total of more than one million students (Peters, 2006). In this university, associate and undergraduate courses are offered in fields such as natural and human sciences, economics, health, engineering, linguistics, agriculture and finance. In addition, courses are offered in various fields (TUENA, 1997).

At the second level, the Provincial Radio and Television University (PRTVU) was established under the responsibility of the Provincial Education Commission. Education is given in medicine, nursing, food, foreign trade and English (TUENA, 1997; Moore & Kearsley, 1996).

At the third level, there are Branch Schools providing distance education under the responsibility of the District Education Office. These schools maintain education in the form of tests, exams, TV broadcasts and laboratory studies (TUENA, 1997).

At the fourth level, there are workstations under the responsibility of local governments. Workstations organize classes, enroll students, collect fees, distribute course materials, and schedule for teachers. Class units at the fifth level provide direct supervision and support educational programs (Moore & Kearsley, 1996). This system, which was established in five steps in China, supports a central planning and implementation of courses and programs, and ensures that the courses are implemented at a significant central and local level (Moore & Kearsley, 1996).

In China, which has a large population, the open university system is quite common and has an vital place in education. There are 6 open universities including China National Open University, Beijing Open University, Jiangsu Open University, Yunnan Open University, Guangdong Open University and Shanghai Open University (Altınpulluk, 2016). There are four different sources of funding for distance education in China. These include government funding, financing provided from various institutions, primarily business environment, funds provided by students themselves or their families, and other resources (Harry, 2003).

As a result, China has made significant efforts in distance education and has mega universities in the World. However, it is structurally different from the open universities in western countries in a few points. Education policy has a different function. Open universities are not conducted to help the disadvantaged people in terms of education as in other countries, but to ensure the development and modernization of the country to a large extent. Moreover, distance education courses are given during working hours. Teaching programs on television play a dominant role for anyone who bases their academic education on writing. Finally, group teaching is emphasized rather than individual learning as it is practiced in the western world (Peters, 2006).

Distance Education in India

After declaring its independence in 1947, India included distance education in its five-year development plans and over time, it has made significant progress in distance education. Although there has been a tremendous increase in the number of higher education institutions over time, higher education institutions that cannot keep up with

the increasing number of students have made the best use of distance education as a tool for continuing education.

Loka Siksha Sambad, a central university, started distance education with 1,112 students via correspondence at undergraduate level in 1962. Dr. D.S. under the chairmanship of Kothari, through correspondence, the Government of India aimed to provide higher education opportunities for those who are generally unable to attend colleges, receive regular education and attend classes regularly due to social, family and employment constraints. Thus, distance education has been accepted as a viable complementary mode (Peters, 2006).

In August 1982, within about two and a half months with the State Legislative Act, students started to pursue distance higher education through correspondence at thirty-four universities, led by Andhra Pradesh Open University. In addition to these developments, Indira Gandhi National Open University (IGNOU) was established on September 20th, 1985, by the help the leadership of academics and with the efforts of the Indian government (İşman, 2011; Peters, 2006). Later, this university simultaneously increased student enrollment in Distance Education institutions through correspondence. By 1998, institutes of fifty-eight major universities in India had established distance education departments which maintained teaching by correspondence and the other distance education units. and there are nine open universities in the country with a total enrollment of about 20 percent of students. Thus, the number of students enrolled in open universities in India approached one million and a tremendous increase was seen in distance education (Peters, 2006).

Today, Indira Gandhi National Open University (IGNOU) serves the educational goals of more than 3 million students in India and other countries with 21 education schools and 67 regional centers, approximately 2,667 student support centers and a network of 29 overseas partner institutions. The university offers approximately 228 certificate, diploma, undergraduate and doctoral programs with approximately 33,212 academic advisors in traditional higher education, professional organizations and industrial institutions as well as 810 faculty members and 574 academic staff in central and regional centers (IGNOU, 2014). The mission of the university (IGNOU) is to provide access to higher education for all segments of society, to offer high quality, innovative and need-based programs at different levels to all those who need higher education, to reach disadvantaged people by offering affordable programs all over the country, to encourage the formation of education standards offered through open and distance education in the country, to organize and to coordinate distance education activities and courses opened in various fields by other universities. The aim of universities is to reach all units of the society, to deliver continuous professional development training to all sectors of the economy, and to develop various communication tools, and to use the latest technology

in order to achieve these goals. This reflects the vision of IGNOU, which keeps its goals in focus (IGNOU, 2014).

Open universities in India follow a regional and centralized study system so that they can operate a massively industrialized system of education, design and develop materials, provide student support, and administer academic programs. These universities offer various certificate, diploma, undergraduate, graduate and doctoral level education and expands various programs for employment and vocational skills for both economic and national development purposes. These programs include the those departments such as management, computer education, surgery, nursing, library and information science, food and nutrition, mother and child health, tourism studies, water resource management, construction management, creative writing, rural development, child care and education, teacher training, journalism and mass communication, agriculture, applied electronics, horticulture. In India, students are provided with assignments, projects, practices, counseling, audio and video programs, library access, workshops and teleconferences as well as supported print training modular packages (Peters, 2006; TUENA, 1997).

Open school was opened in 1979 in order to carry out education activities through distance education at high school level in India. This open high school has a special goal such as reaching students who are out of formal education with various reasons by expanding opportunities in education throughout the country (TUENA, 1997). One of its other important goals is to provide education opportunities for girls aged 6-14 and to ensure education that will provide career and individual development to adult women who have not received education in previous years. There is no age limit for the open school. In the open school, various courses are organized to meet the educational needs of different target groups. During the holiday, face-to-face education is offered as well as distance education, and exams are held in April and October (TUENA, 1997).

Distance Education in Australia

Education in Australia has constantly undergone change in recent years. These changes and developments have also greatly affected distance education. Australia has recently witnessed not only a general conceptual movement towards a student-centered service, but also more tangible developments to the point that institutions produce course materials by using the full range of available technologies very quickly (Harry, 2003). Distance education in Australia took place in three phases.

1st period: Distance education by correspondence mostly covers distance education studies where there is no direct interaction between the teacher and the student by mail. This period covers the years 1910-1970. The university has proposed distance education with correspondence in response to the demands of politically rural areas as distance education has more convenient and less costly access.

2nd period: It covers the period when multimedia and two-way communication tools are used to increase effective teaching and learning. In Australia, this period has been from the early 1970s to the mid-1980s.

3rd term: It covers the period when open, flexible and online learning, internet and digital technologies are used, there are student-teacher, student-student interaction, collaborative group work and flexibility is provided for students in terms of time. This period covers the period to the present from the mid-1980s (Qayyum & Zawacki-Richter, 2018).

Today, many schools and universities in Australia offer distance learning courses as part of their regular education activities. Generally, a two-way communication structure is used (Moore & Kearsley, 2006). Australia has 40 public universities, two international universities and one private university. In these universities, 1,410,133 students, of which 1,046,682 are in the country and 363,451 are abroad, are served through distance education (Australian Government Department of Education and Training, 2017).

Distance Education Centers have been established within the university in order to contribute to distance education in Australia. beyond the general changes in the university sector in 1991, the government paid special attention to distance and open education. Institutions have served distance education not only in relation to the standards of teaching resources and support available to off-campus students, but also in line with government-nominated access and equity goals. In the universities, Associate, undergraduate and postgraduate courses are offered. On the other hand, universities have done distance education for a certain fee to create their budgets (Harry, 2003).

In 1992, the Australian Open Learning Agency, a special education commission, was established. It was later renamed Australian Open Learning (OLA). The purpose of the Australian Open Learning system was initiated to meet the needs of the large number of students from different backgrounds, qualifications, motivations and capacities who could not complete their education in traditional ways. It was funded and supported by the Federal Government. This institution was not an open university awarding its own degree; however, it provided special preparation programs to students and helped them complete the credits that enabled them to graduate from education (Moore & Kearsley, 2006; Harry, 2003). Today, this not-for-profit consortium of seven public universities (Curtin, Griffith, Macquarie, Monash, RMIT University, Swinburne and the University of South Australia) has been renamed Australian Open Universities (OUA). There is no academic entry requirement for students. OUA, which consist of 1000 online units from 12 of Australia's leading universities, offers more than 156 associate, undergraduate and graduate programs in the arts, humanities, business, education, health, information technology, law, justice, science and engineering. Students pay a fee for 13 weeks of undergraduate study. Those wishing to complete a semester's study through a university

that offers face-to-face education pay half of the tuition fee. Working in cooperation with various universities, students are given the opportunity to take courses and graduate from this open university in order to complete their own missing credits (Qayyum, & Zawacki-Richter, 2018).

Australian universities are at the forefront of promoting the use of Open Education Resources (OER). Charles Sturt University, University of Tasmania, University of Technology, Australian Government Department of Education and Training (Student Information and Learning Branch) Higher Education Group have developed a national roadmap to support open education resource reuse and course material production policies. It has developed new strategies to promote innovative pedagogical models and to respect and empower students as co-producers in their lifelong learning, demonstrating the benefits of developing and using OER. In this context, Southern Queensland University (USQ) promoted the use of OER in open education programs by offering its own courses to the Open Education Consortium. In addition, international partnerships have been gained to share open education courses and distance education content globally in Australia. The reuse of these materials is permitted by other Australian and US universities, Australian TAFE Colleges and other providers. USQ also continues to contribute to distance education as the founding partner of the global Open Educational Resources universitas (OERU) (Qayyum, & Zawacki-Richter, 2018).

Many universities in Australia, notably the Australian National University, Monash University and Australian University, are making efforts to develop Massively Open Online Courses (MOOCs) that contribute to people's learning in many different ways. In parallel with these developments, other universities such as Queensland University of Technology, University of New South Wales and Swinburne University have added their MOOCs to their open universities. In addition to these developments, in June 1999, U3A Online Inc.¹³, the world's first virtual university of the third age, started to offer a variety of online courses and courses to develop basic computer skills for all older people and disabled younger people anywhere in the world, especially those who are geographically, physically or socially isolated. These online courses are especially suited to older members of the community who are isolated either geographically, or through physical or social circumstances (including carers). Also, universities are increasingly offering informal online courses. After the interactive courses given for a certain period of time, those who are successful in the online exams are given an Online Certificate (Qayyum, & Zawacki-Richter, 2018).

Universities in Australia have their own accreditation. In this context, all universities are given an autonomy to operate within the legal requirements regarding Australian Government funding. Since January 2012, the Higher Education Quality and Standards Agency (TEQSA) has operated as the national quality assurance agency for Australia's

higher education sector, has taken on the role of the Australian University Quality Agency (AUQA) which is an independent, not-for-profit national agency which was established to promote, audits, and reports on quality assurance in Australian higher education. TEQSA registers institutions and accredited courses using the Higher Education Standards Framework as a benchmark (Education System Australia, 2018).

There are two types of schools in Australia that offer distance education at primary and secondary level. The first of these is Open and Distance Education Schools (School of Isolated and Distance Education) and the other is Schools of the Air (SIDE, 2020)

School of Isolated and Distance Education are distance education and online learning schools created for students who need additional flexibility at primary and secondary level and cannot attend school in a traditional classroom environment. The School of Isolated and Distance Education (SIDE) is the main centre for Kindergarten to Year 12 distance education and online learning within the Western Australian Department of Education. It began operations as the Correspondence School in 1918. The School of Isolated and Distance Education (SIDE) are distance education and online learning schools created for students who need additional flexibility at primary and secondary level and cannot attend school in a traditional classroom environment. These schools are generally attended by students who cannot attend full-time schools due to geographical reasons, travel nationally or internationally with their family in the long term, who enroll in a full-time school but cannot take the courses they want, who involve with elite performance including sport, theatre and music, and who cannot attend regular school due to severe health conditions. Courses are offered online with practical materials delivered to the home. These schools are leaders in the use of technology to independently deliver a high standard of education. These schools use digital technologies to deliver online education programs. The teaching takes place in two ways: The first of this teaching takes place with synchronous, real-time communication over the WebEx web conferencing platform. The second is asynchronous, with 7/24 access. Moodle is also used to present course program materials and facilitate online student and teacher collaboration. Lessons are presented in an attractive way to the elementary and high school children (SIDE, 2020).

School of the Air is a generic term for correspondence schools catering for the primary and early secondary education of children in remote and outback Australia where some or all classes were historically conducted by radio, although this is now given by telephone and internet technology. In these areas, the school-age population is too small for a conventional school to be viable. In these areas, there are a total of five schools whose school-age population is too small to accommodate a traditional school. These schools are located in Carnarvon, Kalgoorlie, Derby, Meekatharra and Port Hedland.

Schools of the Air provide comprehensive education to families with children living

in in remote areas get an education. Each of the five schools serves large areas of Western Australia. Online and offline courses are offered alongside radio and television broadcasting. A SATWEB installation (computer, pc units, printer/scanner/copier, satellite dish and installation etc.) and CD ROM based software, math equipment, early childhood education resources, library and sports equipment are delivered to each registered family, and credit support for these equipment is provided (SIDE, 2020).

Rising Trends in Open and Distance Education Today

Although distance education may seem like a new idea to most educators today, its roots go back more than a century. Despite the recent growth and change in distance education, it continues to shape the future with its deep-rooted traditions (Simonson et al., 2008). Moore and Kearsley (1996) examined the development of distance education in five main phases, by taking into account the use of technological tools. These phases are 1- Distance education by correspondence 2- Radio and television broadcasting; 3-Open universities; 4-Teleconferences; 5- Internet / Web. The development process of distance education is given in Figure 2.

The Development Process Of Distance Education

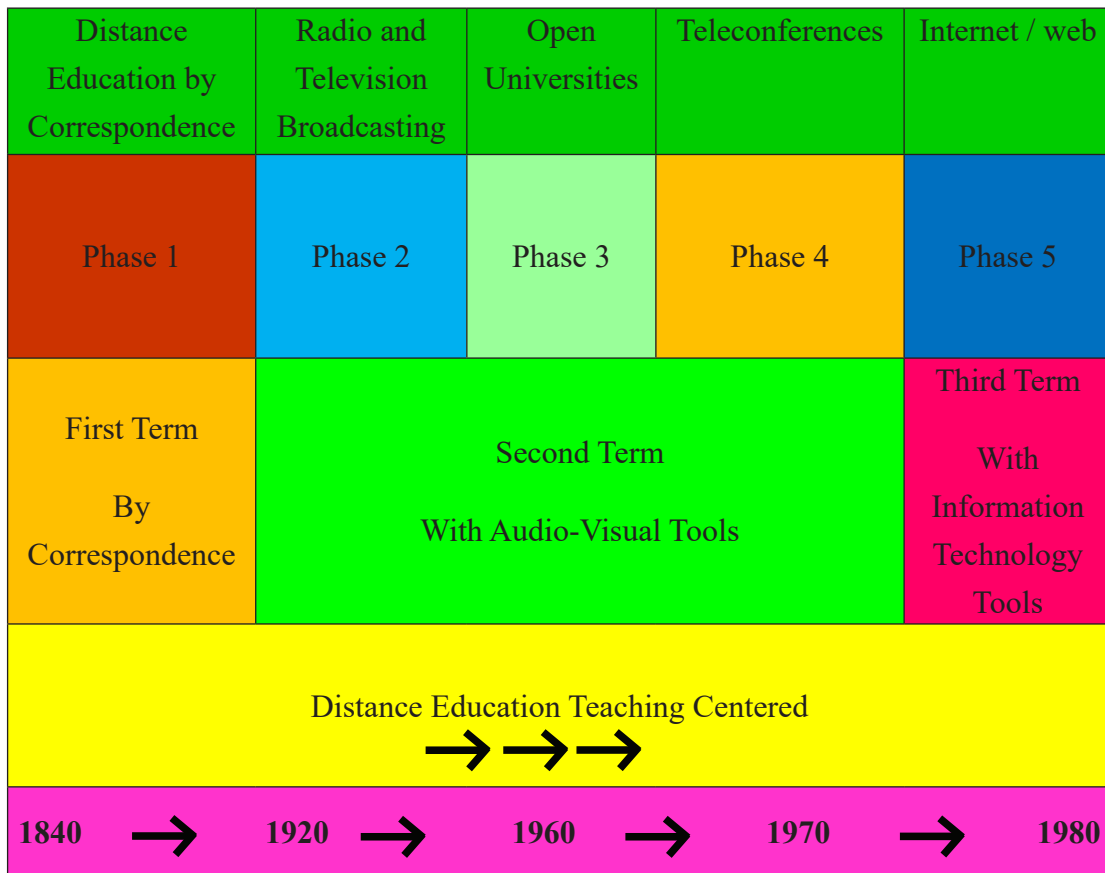


Figure 2. The Development Process of Distance Education (Moore & Kearsley,1996).

It constitutes the first phase of distance education by letter between the years 1840-

1920. In this phase, distance education was widely used via newspaper and letter. During these years, education continued by correspondence. In the second phase, which covered the 1920s and 1980s, countries expanded distance education through radio and television channels. After 1960, which is the third phase, countries started to continue distance education through the open university they established. Phase 4 includes the years between 1970 and 1980. In this phase, a two-way distance education system was implemented with the teleconference system.

Audio-visual tools were widely used in the second, third and fourth phases of distance education. The last phase is the Internet phase, in which computer technologies are widely used and effectively used since 1980.

At the end of the twentieth century, distance education began to take an important place with international economic, political and related ideological changes. In parallel with these changes, significant developments have been recorded in the field of technology. Thus, these changes in turn led to the creation of a new set of regional and international policies for education (Harry, 2003). In particular, developments related to information and communication technologies have significantly affected distance education (Aydın, 2002). Distance learning has been widely used in both formal education and distance education with various applications of computer technologies highly created in the education systems of countries. Thus, new trends began to emerge in open and distance learning (Özbek, 2014). Trends in the use of these distance education tools that shape education are described in the Horizon Report. Horizon Report is a comprehensive project by experts from various countries, established in 2002 in collaboration with the New Media Consortium (NMC) and the EDUCAUSE Learning Initiative (EDUCAUSE Learning Initiative-ELI). The aim of this project is, in education, to describe and explain important developments in technology that are likely to have a major impact on a global scale in the next five years. The NMC Horizon Report highlights six emerging technologies that are likely to be used and implemented over the next five years in focus sectors such as primary, secondary (K-12) and higher education, museums and libraries globally. It covers the discussion of the main trends and efforts that will affect the current education system in the same period (Johnson, et al., 2016). In this context, it can be said that these reports, which deal with the developments and applications in educational technology, reflect the main trends in open and distance education. The main trends in the Horizon Report between 2005 and 2020 are given in the table below.

Short, Medium and Long Term Trends Described in Horizon Report			
Year	Short-Term Trends	Mid-Term Trends	Long-Term Trends
	One Year or Less	Two to Three Years	Four to Five Years

2005	Extended Learning Ubiquitous Wireless	Intelligent Searching Educational Gaming	Social Networks & Knowledge Webs Context-Aware Computing/ Augmented Reality
2006	Social Computing Personal Broadcasting	The Phones in Their Pockets Educational Gaming	Augmented Reality and Enhanced Visualization Context-Aware Environments and Devices
2007	User-Created Content Social Networking	Mobile Phones Virtual Worlds	The New Scholarship and Emerging Forms of Publication Massively Multiplayer Educational Gaming
2008	Grassroots Video Collaboration Webs	Mobile Broadband. Data Mashups	Collective Intelligence Social Operating Systems
2009	Mobile Phones Cloud Computing	Geo-Everything. The Personal Web	Semantic-Aware Applications Smart Objects
2010	Mobile Computing Open Content	Elektronic Books Simple Augmented Reality	Gesture-Based Computing Visual Data Analysis
2011	Electronic Books Mobile Phones	Augmented Reality Game-Based Learning	Gesture-Based Computing Learning Analytics
2012	Mobile Apps Tablet Computing	Game-Based Learning Learning Analytics	Gesture-Based Computing Internet of Things
2013	Massively Open Online Courses Tablet Computing	Games and Gamification Learning Analytics	3D Printing Wearable Technology
2014	Flipped Classroom Learning Analytics	3D Printing Games and Gamification	Quantified Self Virtual Assistants
2015	Bring Your Own Device (BYOD) Flipped Classroom	Makerspaces Wearable Technology	Adaptive Learning Technologies The Internet of Things

2016	Bring Your Own Device (BYOD) Learning Analytics and Adaptive Learning	Augmented and Virtual Reality Makerspaces	Affective Computing Robotics
2017	Adaptive Learning Technologies Mobile Learning	The Internet of Things Yeni Nesil Next Generation (LMA)	Artificial Intelligence Natural User Interfaces
2018	Analytics Technologies Makerspaces	Adaptive Learning Technologies Artificial Intelligence	Mixed Reality Robotics
2019	Mobile Learning Analytics Technologies	Mixed Reality Artificial Intelligence	Blockchain Virtual Assistants
*2020	<ul style="list-style-type: none"> • Adaptive Learning Technologies • AI/Machine Learning Education Applications • Analytics for Student Success • Elevation of Instructional Design, • Learning Engineering, and UX Design • Open Educational Resources • Artificial Intelligence: Technology Implications • Next Generation Digital Learning Environment (NGDLE) • XR (AR, VR, MR, Haptic) Technologies 		

*Short, medium and long-term targets have not been specified in 2020.

Table 4. Key short, medium and long-term Trends between 2005 and 2020 in Horizon Report Today (NMC, 2005; NMC, 2006; NMC, 2007; NMC, 2008; Johnson & Smith, 2009; Johnson et al., 2010; Johnson et al., 2011; Johnson et al., 2012; Johnson et al., 2013; Johnson et al., 2014; Johnson et al., 2015; Johnson et al., 2016; Becker et al., 2017; Becker et al., 2018, Alexander et al., 2019, Brown et al., 2020).

Distance education has taken new forms in parallel with the developments in technology, and the adventure that started with letter teaching continues with advanced information tools. However; the use of computers in education has been a turning point for distance education. Learning theories and approaches that have guided education for many years have transformed with computer technology. With the widespread use of computer and internet technologies at a global level, electronic learning has begun to be used effectively in all areas of education. Today, e-learning tools are easily used by students, teachers and adults (Firat & Yurdagül, 2013). As can be seen from Table 4, it has been observed that new trends have emerged in the use of information tools in educational environments, both in formal education and in the use of individuals for educational purposes throughout their lives. In this context, the structuring of the distance education

system, the characteristics of the target audience how the learner, the teacher and the content will interact with each other by taking into the consider communication opportunities in line with the learning objectives, how the learners and the instructors will be brought together in terms of time and space has been a matter of curiosity for educators (Aslantaş, 2014).

In parallel with these technological developments, it is seen that new learning trends in distance education are on the rise. Accordingly, it is known that educators use one or more methods and learning environments effectively to reach the target audience. In education environment, the rising learning trends stated in the Horizon Report between 2005 and 2020 are given in Table 5 under the main headings.

The Rising Learning Trends in Distance Education Today
1. Ubiquitous learning
2. Mobile Learning
3. Blended Learning
4. Adaptive learning
5. Flipped Classroom
6. Game-Based learning
7. Micro Learning
8. Context Aware Learning
9. Seamless learning
10. Digital Literacy
11. Massive Open Online Courses
12 . Learning Analytics
13. Gesture Based Interaction
14. Personal Learning Environments
15. Virtual Learning Environments

Table 5. The Rising Learning Trends in Distance Education Today (NMC, 2005; NMC, 2006; NMC, 2007; NMC, 2008; Johnson & Smith, 2009; Johnson et al., 2010; Johnson et al., 2011; Johnson et al., 2012; Johnson et al., 2013; Johnson et al., 2014; Johnson et al., 2015; Johnson et al., 2016; Becker et al., 2017; Becker et al., 2018, Alexander et al., 2019, Brown et al., 2020).

Acknowledgements or Notes

This book chapter was generated from the first author’s doctoral thesis titled “ Suggestions For Improvement and Evaluation of In-Service Training Programs Through Distance Education Given By Ministry of National Education “.

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To Cite This Chapter:

Coskun, I., & Demirci, C. (2021). Distance education. In S.A . Kiray & E. Tomevska-Ilievska (Eds .), *Current Studies in Educational Disciplines 2021* (pp. 116–149). ISRES Publishing.