E-Learning and Distance Education
Today’s world is making rapid progress on the path towards the utilization of technical applications in the field of education.

One of the results of this has been a lessening of the financial burden of university education through e-publication of textbooks, free material, and increasing the efficiency of university education. The Kingdom of Saudi Arabia - a nation with both resources and ambitions - has joined the international race to make use of the products of the information revolution by broadening the role of technology in the field of education.

This is particularly true in the area of distance education, as the possibilities of its realization and growth have multiplied in ways not possible in the past.
The Nature of E-Learning
Electronic learning, or e-learning, is education based on modern methods of communication including the computer and its networks, various audio-visual materials, search engines, electronic libraries, and websites, whether accomplished in the classroom or at a distance. Generally speaking, this type of education is delivered through the medium of the World Wide Web where the educational institution makes its programs and materials available on a special website in such a manner that students are able to make use of them and interact with them with ease through closed or shared, networks, or the Internet, and through use of e-mail and online discussion groups.

The definition of e-learning centers on its being a learning method and a technique for the presentation of academic curricula via the Internet or any other electronic media inclusive of multimedia, compact discs, satellites, or other new education technologies. The two parties participating in the educational process interact through these media to achieve specific educational objectives.

During the 1980s, the compact disc (CD) began to be used in education, but the fact that it lacked the quality of interaction between the student, the material and the teacher was an important flaw in the opinion of a number of educators. This problem was only resolved with the appearance of the Internet which justified the adoption of e-learning because it fulfilled the condition of immediacy or simultaneity.

E-learning assists in the transformation of the educational process from the stage of learning by rote to one characterized by creativity, interaction and the development of skills. The student, in e-learning, is able to access educational materials at any time and from any place, thereby transforming the concepts of the educational process and learning to go beyond the limits imposed by traditional classrooms into a rich environment in which there are numerous sources of learning.

Sources of programs of e-learning include experts in the field, ministries, corporations and other organizations concerned with the dissemination of technical applications in education. Programs are offered by way of closed or shared networks, as well as over the Internet, and e-mail and discussion groups are among the techniques and mechanisms employed in e-learning.

Distance education seeks to assist in the achievement of equivalence of educational opportunities and equality among students, in order to respond to the constantly increasing demand for education, whether among those whose circumstances do not permit them to enroll in traditional classroom-based learning or those whose personal, economic or social circumstances prevented them from access to education. Distance education also answers the requirements of the national development plans aimed at providing trained and qualified human resources as well as increasing the opportunities available for continuous education, training and professional development for those already working. Moreover, distance education makes it possible for youth and older people, men as well as women, and housewives to invest their leisure time in educating themselves and gaining the skills and experience that they desire.

Distance education is also important in the area of higher education, where it began in a modest fashion and then expanded to a point where it became indispensable, after having passed through the stages and roles outlined in the following table.

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<tr>
<th>Stages in the development of the forms of distance education</th>
<th>First generation</th>
<th>Second generation</th>
<th>Third generation</th>
<th>Fourth generation</th>
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<td>Correspondence education using printed materials.</td>
<td>Education using the following media:</td>
<td>This generation was distinguished by audio and written interaction between teacher and students, and live transmission of material over the radio or television</td>
<td>Use of compact discs, electronic libraries, multimedia and the Internet as sources of information, as well as to transmit and exchange information</td>
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In accordance with the goals of the National Plan for Communications and Information Technology, the Ministry of Higher Education has charged a specialized group with the task of preparing a plan for e-learning and distance education in higher education institutions. The group presented a document which included a definition of e-learning and distance education and the most significant concepts and issues associated with them, in addition to the main factors and requirements for the implementation of e-learning and distance education in the academic environment. The document also included a description of the present situation of university education institutions in the Kingdom and a presentation of the most important international experience in this field. It then moved on to present a scenario for the development of the components of the educational society, a strategy for preparation and training, institutional development, the administrative and technical staff, components of the educational portals, specifications for optimal educational administration, and, finally, an implementation plan for an optimal e-learning and distance education system.

In calling for a transformation to a system of electronic learning and distance education, the document relied on the ability of the new technology to solve some of education’s problems, and afford a communications environment of high potential, capable of assisting in the development of university education and the increase of its efficacy. This would bring about an responsive to the needs of the labor market and a knowledge-based economy, and assist in the development, dissemination, and use of educational materials and interaction with them, while also playing a role in serving the needs of learners who experience difficulty in being physically present in traditional learning environments.

The Ministry of Higher Education has taken a number of clearly-defined steps aimed at disseminating the experiment of e-learning and distance education. It has described this initiative as “a national project which will serve learners in all the Kingdom’s cities” and as a “new educational paradigm” which will condense both space and time and participate in keeping pace with new developments in the realms of education. To achieve this goal, the ministry has called upon university faculty and concerned parties to interact with this initiative in a positive manner, because it will afford solutions to many of the problems which impede the progress of higher education.

Perhaps the greatest support for the Ministry of Higher Education’s orientation towards e-learning and distance education comes from the fact that Saudi universities have realized significant progress in the area of employing the solutions offered by e-learning, and they have been assisted in this by the electronic databases provided by the Ministry.
The Foundation and Goals of the Center

The first step towards the recognition of distance education and the use of technology in e-learning in the Kingdom of Saudi Arabia occurred in Ah 1427/2006, when the Ministry of Higher Education signed a contract with the Malaysian company METEOR for the implementation of the foundation of the National Center for E-Learning and Distance Education at a cost in excess of 47 million Saudi riyals.

The aim of the Ministry in the establishment of this Center was for it to be the nucleus of e-learning and distance education for the Kingdom’s university education institutions, to coordinate the efforts of institutions seeking to adopt this type of learning, and to facilitate delivery of e-learning to Saudi students, as well as to overcome the shortage in university faculty.

The foundation of the Center came in affirmation of the international trend towards central coordination for e-learning applications and in order to unify both the standards and the successive stages in the design and production of digital educational materials, while also contributing to the training of educational personnel needed to achieve these goals. This ambitious project came in response to the call outlined in the National Plan for Communications and Information Technology regarding the necessity of broadening the scope of the incorporation of e-learning in university education institutions and facilitating the delivery of university education to all those who desire it in all regions of the Kingdom. Another goal of this project is to employ e-learning and distance education technologies in support of university education for women in the Kingdom. At the same time, the new Center will work to coordinate the efforts of institutions seeking to adopt this type of learning, and to facilitate delivery of e-learning to Saudi students, as well as to overcome the shortage in university faculty.

The role of the Center is to support the educational process on all levels of university education and to make it available to all groups of learners, without any temporal or spatial restrictions, in implementation of the new policy of the Kingdom of Saudi Arabia which accords a high value to e-learning and distance education and gives them a great deal of importance. This new policy has necessitated the establishment of a dedicated Center which would work to coordinate the efforts of the Kingdom’s universities and lay the foundation for e-learning and distance education.

The establishment of the National Center for E-Learning and Distance Education required a number of important steps, which may be outlined as follows:

- The assistance of specialists and concerned parties in government sectors was sought through brainstorming sessions, specialized consultations, and the formation of a main committee composed of female members selected from the higher education sectors, followed by the formation of university working groups composed of specialized faculty members, which held unified consultations and coordinating meetings.
- The project was supported by the experience of these specialists by enabling them to attend international symposia in this field.
- Monitor the progress of others in this field, concentrating on successful experiences, in order to begin where others have left off. For this reason, a benchmarking study was executed with regard to those experiences.
- Visits were carried out to selected international universities in order to observe examples of experience in this field, and to enter into coordination with them, the goal being to crystallize a comprehensive system established upon strong and secure foundations.
- The Center’s Mission

The Center strives to harness all available resources to support the educational process by affiliating with the Ministry of Higher Education and to facilitate its educational outreach, through the optimal usage of modern information and educational technologies, designed to enhance communication and interaction in education and enable it to achieve its objectives.

Goals of the Center

- Disseminate e-learning and distance education applications in university education institutions in accordance with accepted quality standards.
- Help to increase the absorptive capacity of university education institutions through e-learning and distance education applications.
- Spread technical awareness and the culture of e-learning and distance education, as steps on the road towards building an information society.
- Participate in the evaluation of e-learning and distance education projects and programs.
- Support research and study in the fields of e-learning and distance education.
- Set quality standards for the design, production and distribution of digital educational materials.
- Provide consultations to relevant organizations in the area of e-learning and distance education.
- Develop and disseminate educational software to serve the educational process in both the public and private sectors.
- Encourage distinctive projects in the field of e-learning and distance education in university education institutions.
- Organize meetings, conferences and workshops which will help to develop e-learning and distance education.
- Cooperate with organizations and institutions around the world active in the field of e-learning and distance education.

The Center’s Vision

The National Center for E-Learning and Distance Education’s vision of the future is based upon the foundation of an integrated educational system which depends on benefiting from modern technologies in the realm of e-learning and distance education, under the aegis of a national center which will lend its support to the educational process in university education institutions in all its stages and categories without regard to time or place. The goal is to fulfill the Kingdom’s mission to spread knowledge grounded in the principles and values of tolerance promoted by Islam, so that the Center will come to become a cornerstone of the virtual Saudi university.
Projects of the Center
During a short span of time, the National Center for E-Learning and Distance Education has undertaken successfully a number of educational projects which have become milestones on the Kingdom’s path towards the implementation of e-learning and distance education. These projects include:

1 - Tajsir E-Learning Initiative

This initiative, in its technical and academic aspects, is concerned with the development and modernization of traditional education and its methods in order to keep pace with modern educational methods. It is based on support of university education institutions in the adoption of the most modern applications in the area of e-learning and distance education.

The idea behind the Tajsir initiative lies in the Center’s desire to facilitate the transformation process by taking the necessary first steps on the path towards building an integrated structure of e-learning applications. By this means, the Center hopes to realize the following objectives:

• Support adoption of the Jusur system through signature of memorandums of understanding and contracts between the different universities and the Ministry as represented by the Center, with the aim of implementing the Jusur system in the universities.

• Provide technical training for the manpower in institutions of university education, in order to facilitate use and support of the Jusur system and develop production lines.

• Consultant and logistical support in providing optimum solutions for e-learning applications, while also providing the best examples in this area.

• Participation in awareness and change management programs through publications, lectures and training courses.

The Tajsir initiative for e-learning is an expression of the basic philosophy of the National Center for E-Learning and Distance Education, which is a concept reflecting the different strategies adopted by the Center in order to modernize the Kingdom’s educational system and meet the country’s changing needs. Tajsir is an umbrella for the Center’s ideas and applications which have been developed in realization of its goals, beginning with the preparation of the groundwork for e-learning, and proceeding on to strengthening the community’s understanding of this type of learning, in order to arrive at the consulting support necessary to design applications and reach creative technical solutions.

2 - Educational Portal

The educational portal of the National Center for E-Learning and Distance Education is a medium for the dissemination of knowledge, enrichment of skills, and exchange of experience related to e-learning and distance education, through the services made available by the portal, including the following:

• News: this section of the educational portal is devoted to the latest news about e-learning and distance education, in addition to news about the Center’s activities as well as those of other higher education institutions of relevance to e-learning and distance education.

• E-courses: includes all the digital courses available from the Jusur learning management system, which can be developed by faculty members in institutions of university education. These materials are made available as open sources, which can be easily accessed, used and further developed by the portal’s visitors according to the value added to them as a result of being used in real educational situations. This helps disseminate knowledge, making it available anytime, anywhere.

• Forum: the forum is open to all those interested in e-learning and distance education for discussion and exchange of opinions and expertise in different areas which serve the educational process.

• E-learning terminology: aims to spread awareness about terms connected with e-learning and distance education among visitors to the portal.

• About the National Center: this section presents an introduction to the Center and its mission and goals, as well as the projects which it has completed or intends to carry out in the future. In addition, it affords an electronic environment for the management of the learning content produced by the Center’s consultants and employees, in such a way as to prepare an appropriate medium for interaction and facilitation of joint management tasks.
This is in addition to the capability of viewing websites on the Internet, executing questionnaires, and asking short questions during the learning session.

Jusur also offers the Qanatuka (Your Channel) service on its website which allows viewing and evaluation of educational videoclips as well as the ability to send comments by e-mail. Film materials in Qanatuka are distributed among several subsidiary channels, including ones devoted to religious sciences, social sciences, languages, biology, physics, etc. Qanatuka is a free site which allows a subscriber to upload educational files which can then be viewed by others in a secure educational environment.

Also included within the Jusur system is the virtual learning management system. Grades and test scores are able to design and administer electronic exams through the Jusur content administration system.

Also included within the Jusur system is the virtual learning management system. Grades and test scores are automatically stored in special tables. The student is able to access his own webpage where he can view his assignments and grades, while the instructor is able to design and administer electronic exams through the learning management system. Grades and test scores are automatically stored in special tables.

Also included within the Jusur system is the virtual classroom system, which is distinguished by the possibility of communication between students and faculty through voice, image and text, file and media sharing, a whiteboard facility, which can be used in downloading presentations, in addition to the potential to share any program or application on a student’s or teacher’s computer with the rest of the students.

The training programs offered by the Center include:

- Design of interactive lessons
- Use of new technology in training
- Design of two-dimensional animated forms
- Construction of electronic examinations
- Design of interactive lessons

Projects of the Center

3 – Jusur System for the Administration of Electronic Learning

The Jusur system for the administration of e-learning is an integrated software system responsible for the administration of the e-learning process, which comprises:

- Registration: entry and management of students’ information
- Scheduling: scheduling of courses; devising teaching plans for courses
- Delivery: delivery of content to students
- Monitoring: tracking students’ progress; issuing reports on their progress
- Communication: communication between students through discussion groups, forums, file-sharing and e-mail
- Testing: evaluation of students through examinations and their evaluation

Jusur also includes the Learning Content Management System (LCMS), which is an environment through which learning objects can be stored in learning object repositories and used to develop teaching materials. This system is distinguished by high-level research capabilities, which enable developers to search and quickly locate the text and media materials they need to build learning content.

The training programs offered by the Center include:

- Design of interactive lessons
- Use of new technology in training
- Design of two-dimensional animated forms
- Construction of electronic examinations
- Design of interactive lessons

4 – Saudi Repository for Learning Objects

The National Commission for E-Learning and Distance Education has established the Saudi Repository for Learning Objects, a primary electronic channel which aims to raise the level of the educational process in general, enrich the educational content of digital courses, and overcome difficulties faced by students.

The Saudi Repository for Learning Objects assists in the storage, retrieval and reuse of learning objects, and supports the efforts undertaken by Saudi universities in the construction of high quality low cost digital courses. It also allows universities to exchange experience in the production of educational content in accordance with the most modern international standards and applications.

5 – Excellence Award in University E-Learning

Goals of the Award

The Award seeks to recognize excellence in the field of e-learning, encourage the development of e-learning in the Kingdom and initiatives which enrich university-level e-learning, expand applications of e-learning, disseminate awareness regarding the culture of excellence in e-learning, and adoption of standards of excellence and innovation in e-learning applications.

Branches of the Award

The Award subsumes several branches related to excellence of learning objects, excellence of animated presentations, individual and institutional excellence in realizing the best achievement which highlights e-learning, excellence in e-learning courses, excellence in academic research which serves e-learning, and finally excellence in the employment of modern technology.

Projects of the Center

6 – Qualification and Training Project

This project aims to qualify and train faculty members and technical support staff in universities in the field of e-learning and its applications. The training programs are presented by a group of qualified Saudi and international experts and trainers.

Training programs offered by the Center include:

- Electronic learning and its tools
- Learning administration system (Jusur)
- Jusur content administration system
- Construction of electronic examinations
- Design of two-dimensional animated forms
- Use of new technology in training
- Design of interactive lessons

Conditions and Criteria

1. The Award is open to all government and private university education institutions, schools, and students, according to the appropriate branch.
2. The work must not be completely in-progress. Registration form must be completed within the specified time-frame.
3. Data required by the committee of judges must be presented for those works for which it is necessary, if such data has not been presented, the relevant work will not be considered.
4. Photographs, sound files, and content used in works entered must abide by copyright laws and their use must be legal. Parties submitting works will bear any consequences in this regard. Ownership of material entered will be shared between developers and the National Center for E-Learning and Distance Education.
More information about training programs presented by the Center, their timings, and the locations where they are held can be found on the Center’s website.

7 – Saudi Digital Library

The Saudi Digital Library is one of the pioneering projects inaugurated by the National Center for E-Learning and Distance Learning. Its goal is to raise the level of the educational process in the Kingdom through support of the system of teaching and learning in general and electronic learning in particular and meet the requirements of scientific research, as well as strengthen skills and help build a knowledge-based society. The Library’s role is highlighted in the time and effort it saves in the process of learning, teaching and academic research.

The Saudi Digital Library supports e-learning courses by providing sources important to students and teachers alike and facilitating the exchange of information.

At present, the Library includes more than 90,000 titles of digital books from the most renowned publishers, all of which are available to university students and faculty.

8 – Saudi Center for Support and Counseling

The Saudi Center for Support and Counseling provides technical and academic support for e-learning users, both students and teachers through its modern telephone and computer communication capabilities, which provide direct voice communication, e-mail, chat, fax, and text messages.