

## Activating web networks through the experience of the Virtual University in Algeria

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**Abstract---**Science has recently witnessed an information revolution. Communication and media technologies were the decisive factor in these transformations and changes, which affected many fields, especially the scientific research sector. The activation of scientific research in the web is one of the reflections of technology in the educational field, and the concept of scientific research and the web is based on employing technical means in the educational field mainly. Through this new style, they receive lectures and lessons, conduct dialogues and communicate with professors without the need to travel to the university. Algeria has known this style of education and the new forms of these universities recently, with the entry of the Internet to it and making it available to institutions and individuals for their use in social and educational purposes in particular.

**Keywords---**the World Wide Web, the virtual university, information technology, higher education.

### Introduction

Algeria has sought to give scientific research the importance it deserves. It has worked to build educational institutions and to democratize and free education, but the goals are great and the possibilities are limited. Hence the idea of establishing a center that works on the universalization of education by correspondence, addressed to all who wish it. The National Center for correspondence education was established in 1969.

Among the most important concepts related to electronic scientific research we find: the concept of remote scientific research, direct research, Open Research, Research via the internet using simultaneous or recorded lessons, video, image and audio technologies, electronic presentation technologies, Video Lectures broadcast over the internet.

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Through the results of some researches and studies in this context, it turned out that the professors are sufficiently familiar with the concept of electronic research and they also have a good knowledge of the most important related concepts, which allows us to say that theoretical knowledge of this modern technology does not represent a problem for professors, and this is because they are either familiar with what is published about it in scientific journals and books or because they are using these techniques in teaching as well as in research work.

## **1.The web and the Virtual University**

### **1.1. The Spider's web:**

It includes all modern means adopted in education, i.e. all electronic means of presentation, photos, graphics, computers and presentation tools that contribute to the transfer of knowledge in the shortest time, such as computers, presentation means, electronic lectures and others <sup>1</sup>.

It is also known that e-research is a "modern and well-designed form of learning delivery, which is student-centered and interactive and allows a learning environment from anywhere and at any time by using diverse digital technology sources that are flexible and provide a distributed learning environment.<sup>2</sup>

Electronic research is a method of education using modern communication mechanisms from a computer, its networks and multiple media of voice, image, graphics, search mechanisms, electronic libraries, as well as internet portals, whether remotely or in the classroom.the important point is to use technology of all kinds to deliver information to the learner with the shortest time, the least effort and the greatest benefit.

Distance learning is a derivative part of e-learning, and in both cases, the learner receives information from a place far from the teacher (the source of the information), and when we talk about e-learning, we do not necessarily have to talk about simultaneous -line learning, e-learning may even be asynchronous. Virtual education: it is to learn useful from distant locations that are not limited by space and time through the internet and technologies<sup>3</sup>.

### **1.2. Objectives of scientific research and spider webs:**

That access to the portal of modern technologies should be based on specific goals that must be achieved through this access in order to achieve the greatest benefit, and to achieve this, we believe that one of the most important goals that must be achieved from e-learning is the following <sup>4</sup>:

- The purpose of providing a rich and multi-source educational environment that serves the educational process in all its axes.
- The task is to reformulate the roles in the way the teaching and learning process is carried out in accordance with the novelties of pedagogical thought.
- The purpose of creating incentives and encouraging communication between the research process system.
- The task of modeling the research and presenting it in a standard form. The lessons are presented in a typical way and the outstanding educational practices can be repeated. Plan for Model lessons the optimal exploitation of sound, image and related multimedia technologies.
- The transfer of educational experiences through the creation of communication channels and forums that enable teachers, trainers, supervisors and all those interested in educational affairs to discuss and exchange opinions and experiences through a specific location that brings them all together in a virtual room despite the distances often.
- The aim is to prepare a generation of teachers and students who are able to cope with the technology, the skills of the Times and the enormous developments that the world is witnessing.
- To help spread technology in society and make it an electronically educated society and keep up with the Times.

With the use of information and Communication Technology in the field of research, it is easy to change the traditional role played by the teacher and trainer. The E-search technology generally saves the time of the teacher / trainer and reduces the direct teaching tasks performed by him. In this technique, instead of directly presenting information ( as in a traditional lecture), the teacher acts as an assistant expert for students, whose tasks become direct information search, dialogue management, educational panel discussions and feedback analysis in preparation for making a decision about his students' learning<sup>5</sup>

It also refers to distance learning or computer-enriched learning, the internet, using web-based research methods, group sharing programs, e-mail, chat, computer-based assessments, etc., perhaps what gives this type of research is the high flexibility as it is characterized as teaching the five signs: anywhere, anytime, any medium, any field<sup>6</sup>

### **1.3. Virtual University:**

It is the university that has freed its students from the barriers of time and space, and research and communication are through various technological technologies, most notably the internet<sup>7</sup>.

The term "Virtual University "is used by virtual university to refer to any organization of higher education provided through modern communication technologies, especially computer and the internet, without students needing to attend any traditional university that requires them to attend official classes on the site of that university<sup>8</sup>

The central idea of the virtual electronic University is to use information technology (especially computers), communications and the internet to help researchers access any education they want, at any time they want, and by any means they want, and they may get their education from one source, or from multiple sources (which is the majority), and with the multiplicity of opportunities and fields in front of them, the whole world becomes (literally) at their fingertips<sup>9</sup>.

Some studies document that the beginning of the emergence of virtual universities was in the last decade of the twentieth century, as a result of the development of many technologies such as direct conversations, audio and video conferences, the creation of virtual hubs, modern communication networks, the internet, etc., as the emergence of this type of universities began in 1999 at New York University with a virtual Faculty of one of the university colleges, and it was a very encouraging experience, which led many higher education institutions to go through the same experience. A virtual university can offer wide possibilities for university education, perhaps one of the most important is its wide-ranging opportunities for scientific research for every student at any time and anywhere by addressing several issues related to traditional university research and addressing the costs and sources of funding for government and private and free university education<sup>10</sup>.

For a virtual university, there is no need for classes within the walls, or direct indoctrination from the professor to the student, or students gathering in exam halls, or the student coming to the University for registration and other procedures.

## **2. Spider networks in Algeria**

### **2.1. Electronic scientific research:**

E-research in Algeria opens the way for professors to exchange experiences and benefit more from the work of their colleagues with experience in the field through direct communication or otherwise, which made education a simple thing done by the push of a button unlike traditional research, and despite what Algeria knows of lagging behind in the field of the power of internet flow compared to other countries, study sites in Algeria have managed to make this product more effective and I have also encouraged many investors to establish educational projects that use internet technology in an effective

way in order to provide educational content that transcends temporal and spatial boundaries, and creates a new educational experience that breaks the traditional template<sup>11</sup>

Electronic research in our current age is a new gain and communication propaganda that contributes to the dissemination of scientific knowledge in advanced and modern ways that are in line with the requirements of advanced scientific research and the new and modern requirements imposed by technological virtual reality, which greatly helps to get out of the shell of tradition into a wider space, where all practical and successful ways in the instructional process, the direction to Modernization of university education in Algerian university institutions with mechanisms and means of digital content, and its unique features that work to give the education process a new breath characterized by the spirit of creativity, innovation and active participation as an alternative culture in the field of scientific research, and given the educational reality at the level of our Algerian universities, we will find that there is little use of the E-search mechanism in some universities, and it is absent in some of them, due to several factors that have made the E-search process at our universities just a circulating scientific concept, without the concerned groups working to establish it as an educational culture, a practice that contributes to the development of the university environment and from traditional research or its enhancement 'And the trend towards the modernization of scientific research in Algeria, especially in such health and disease crises experienced by the world and Algeria in particular

Electronic remote research has great importance in the field of higher education, because of the advantages it provides and the goals it achieves, and its importance and necessity have emerged inevitably with what the country and the rest of the world have known as a result of the "coronavirus-covid-19" crisis, late 2019 and 2020, where I consider electronic remote research and access to the technological means on which this type of education is based, the ideal solution to ensure the process of higher education and scientific research. By following up the lessons with communication between students and professors using distance learning technologies, and avoiding a white university year that harms students and destroys their morale.

### **2.2 the future of scientific research in Algeria:**

Many people believe that the future of scientific research in Algeria, in light of the stakes witnessed by the educational arena in recent years, can be in e-learning because of the level of services it provides, in addition to relying on many of the peculiarities resorted to by countries that are below the first ranks in the quality and level of education around the world, and among the factors that have helped expand the use of e-learning, the development of digital technology in the current era, which has opened the way for many institutions interested in education and its dissemination, to exploit it as an important means of Communicating Science and knowledge to as many people as possible, is the development of special research networks, whether on Social communication or through special websites, in order to spread the benefit, by providing this scientific service to those who need it from those who cannot reach it for any of the reasons mentioned earlier<sup>12</sup>

### **2.3. Spider networks in Algeria:**

The educational arena gradually began to receive many research sites, some of which imposed their own rules and try to prove their success, and this is embodied by the study site in Algeria "top academic", others worked on the development of traditional education and transfer the experience to the virtual space in a simple and modern way, and from this point of view we can say that In front of these developments, and in light of the increasing prevalence of electronic search sites and study sites in Algeria, and the high turnout for them, educational specialists are increasingly concerned about the quality of educational services provided, starting from the content, through the methods used in research, up to the overall form or design of the website or electronic platform<sup>13</sup>.

### 3. Advantages and disadvantages of scientific research

#### 3.1. Advantages:

Electronic research has many advantages that make it an effective means of developing education and increasing its efficiency, including:

- Electronic research helps the researcher in the possibility of receiving information at anytime, anywhere, and helps solve the problem of overcrowding of lecture halls if used in the way of Open Distance Education, expanding admission opportunities, and being able to train and educate workers and qualify them without the need to leave their jobs and find an alternative.
- To expand the opportunities for admission to higher education and overcome the obstacles of limited places, and enable higher education and scientific research institutions to achieve the optimal distribution of their limited resources.
- The aim is to take into account the individual differences between researchers and enable them to familiarize themselves with the research processes in suitable environments for them and progress according to their own capabilities.
- The aim is to reduce the administrative burden of academic courses through the use of electronic means and tools in communicating information, assignments and assignments to the student and evaluating their performance.
- E-research contributes to the development of thinking and enrich the learning process.
- E-research or e-universities help reduce the cost of education as the number of students increases.
- This increases the possibility of communication for the exchange of opinions, experiences and points of view between students and the professor, and between the students themselves through many means such as e-mail, discussion rooms and interactive video.
- Electronic research overcomes the problem of increasing numbers with the narrowness of halls and the lack of available capabilities, especially in colleges and theoretical specialities<sup>14</sup>.

#### 3.2. Obstacles:

There are many technical, administrative and human obstacles that prevent the spread of e-research in universities, and he believes that e-research faces two types of obstacles, which are as follows:

##### 1. Physical obstacles:

- ✓ The problem is the non-proliferation of computers.
- ✓ Reduced internet coverage and speed.
- ✓ Due to the high cost of electronic communication.

##### 2. Human constraints:

- ✓ The scarcity of a faculty member who is fluent in the "art of electronic research"  
To eliminate the misconception that all university faculty members can contribute to E-research<sup>15</sup>

As for Algeria, there are many difficulties, which we summarize as follows:

#### A - In terms of learners:

- 1.The difficulty of switching from a traditional learning method to a modern learning method, especially here in Algeria.
- 2.It is difficult to apply it in some subjects, for example, the English language needs what is known as body language and naked eyebody Language & Eye contacts
- 3.The difficulty of obtaining computers for some students.
4. The guidance of some masters can sometimes lead to poor understanding and confusion.

#### B-On the part of the professors:

- 1.The difficulty of dealing with the student is unaccustomed to self-research.
2. It is difficult to make sure that the student is able to use the computer skill.
- 3.The degree of complexity of some materials.

#### 4. Effort and physical cost<sup>16</sup>

### Conclusion

Despite the fact that Algeria has the elements and allocates huge resources to access scientific research to advanced stages, the relationship between the student and the professor through digital media has not known a noticeable development, talking about a virtual university is premature unless the interaction between the student and the professor is enhanced at the level of virtual education.

The budgets allocated for electronic research in Algeria are huge compared to Western countries because they do not reflect the quality of scientific research in Algeria, so Algeria should work to exploit the enormous resources it has in improving the quality of research by keeping up with new methods and giving it serious by enhancing the virtual interactive relationship between the professor and the student.

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