ELAMEER-IDRUS ORBITAL E-EDUCATION FRAMEWORK FOR THE UNIVERSITY OF MUSTANSIRIYAH (UOMUST)

Amer Saleem Elameer & Rozhan M. Idrus
School of Distance Education
Universiti Sains Malaysia
Penang, Malaysia

ABSTRACT
The study of the university of Mustansiriyah case show us very clear that university suffers from a lot of problems start from the security , technology , management , pedagogical and ethical. Based on a pre-questionnaire survey about e-learning results, interviews and studies show us the need to the complete e-education system. Continuous scrutiny and study of the Iraqi higher education showed us very clearly there was something missing and need to be more reinforced in our modified Khan framework especially with the revolution of the wireless technologies. A framework was designed with many added dimensions like stability, time, learner, content control, standardization, scalability and modularization. As a result, a new framework, is an *ELAMEER-IDRUS* orbit e-education framework with a good acceptance at the post evaluation process that was achieved from a group of 231 senior academics.
Keywords: University of Mustansiriyah (UoMust), e-Education , Khan e-Learning framework , Modified Khan e-learning framework ,

INTRODUCTION

There are no doubts about the benefits of educational technologies to higher education and the impact on the learning process; in Iraq it demands for a change in the mindset of the students, lecturers, administrators of the universities, learning leaders, and the decision makers(Harb, 2008; Husain, 2004). Nowadays, the linear learning methods are obsolete and replaced by a cyclical new modern methods. Students now can start with study, go to work and come back to study again. This cyclic pattern will be the future feature of higher education, and technology will be the catalyst in realizing the flexibility, simplicity, durability, standard ability, scalability and mobility. E-learning could also easily customize the academic programs based on the demands and the geographical, culture, technological constraints of the students.

Iraqi universities are in urgent need for e-education systems and also the ministry need for the e-ministry, since the e-education are the focus on the learning and pedagogical factors. E-education can be defined as the learning process that involves e-learning with the different administrative and strategic measures needed to support the learning in an Internet environment, and it will incorporate a local, regional, national and international view of education. Most of the lecturers found them self without any instructional aides or educational technologies to use it because of lowest governmental budgets, especially in education systems with monitored increasing in the students' numbers.

Previously like all the education systems in the world the learning concept in Iraq was teacher-centered, and when the world start to change this concept and start making the learner as the core. The Iraqi education system starts to concrete the lecturer role as the core and center of the learning process. The reason for that was :

1-Difficult economic living condition in all of Iraq, missing the required concentration for the students and learner.
2-Government focusing on the quantity not quality of the graduates.
3-Learner core concept starts at the end of the eighteen decades when the Iraqi economy starts to fall down pursuant to the first gulf war.

As a result of complications and the circumstances that have passed on Iraq and the characteristics of the universities educational environment, it has been found that the adoption of any educational e-learning model or framework will not be useful for UoMust or the Iraqi universities because of the many factors that will play a big role in affecting e-education in Iraq's universities, and it was necessary to build a special e-education framework which considers all the education dimensions into consideration in Iraq to reach the best of the quality teaching.

After scrutinizing the e-learning framework from past researchers, it was found that each designer put their own ideas in the framework but most of them stated some factors that could influence an electronic learning system. Some variables in this research were selected from literature that was reviewed and others were from interviews

with experts in the field of e- learning in different science sectors. Many studies have identified important variables dealing with an electronic learning system.

METHODOLOGY

The ADDIE model (Analysis, Design, Development, Implementation, and Evaluation) was utilized in the study. Our framework is a result coming from :

1-Searching for the best e-education and e-learning frameworks in the previous studies and literatures.
2- An exploratory research of the state-of-the-e-learning and e-education and their future perspectives in our research context about Iraqi higher education.

A specially formulated questionnaire was designed and distributed between a group of Iraqi Mustansiriyah University staff to investigate the direction towards the e-learning elements, management & institutional problems, which are the basic elements of the proposed strategy and that could face the implementing e-education projects, the benefits that will be gained to the higher education sector, and the technology problems.

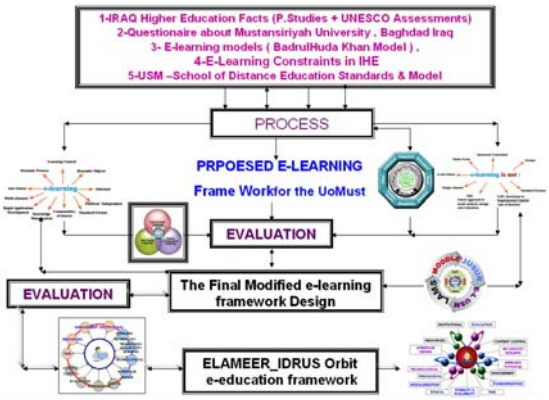

Figure 1: The research methodology framework

The Instrument

The Statistical procedure and the data analysis is one of the most important parts of the research work, and according to (Marczyk et al. 2005) "in most types of research studies. The process of data analysis involves the following three steps: (1) preparing the data for analysis, (2) analyzing the data, and (3) interpreting the data". At the preliminary stage, a survey technique was used to collect the data and prepare it for the analyzing through a questionnaire of 44 statements for the e-learning and ICT skills in the UoMust. Preparation of the data for analysis was collected from the questionnaire which was divided into two parts. The first was the general and personal information the second included the targeted questions that as divided into five categories of management, institutional, technology, human resources and general.

The questionnaire was distributed between the academicians and after completing the framework design and at the final stage a post evaluation was achieved by a questionnaire of 50 statements about the design and all its elements and components.

All the statements and feedback were analyzed and computerized using the statically package for social science (SPSS) to obtain the mean (M), standard deviation (St.D), percentages (%). A Likert scale of six points was used (Gelin 2003), and they are: strongly agree (SA)-6, agree (A)-5, neutral (N)-4, disagree (DA)-3, strongly disagree (SDA)-2, don't know-(DK)-1 (Kaghed & Dezaye, 2009);(Mohammad, 2008).

The Orbit Framework

The power and effectiveness of these new tools and methods are always being associated with the electronic learning methods, pedagogy, technology, institutionally, managerially, equity, ethically, interface designs and the way to access and any other variables could play a role in the learning process. To change this situation, we need to build a complete education system its core or center is the student or the learner since the researches and all the up to date educational theories prove that and encourage to design the learning environments centralizing the student or learner for an e-Education framework for the University of Mustansiriyah.

The Khan framework portrays a comprehensive theoretical e-learning model. E-Learning can be defined now as Badrul H. Khan stated: An innovative approach for delivering well designed, learner-centered, interactive, and facilitated learning environment to anyone, anyplace, anytime, by utilizing the attributes and resources of various digital technologies along with other forms of learning materials suited for open and distributed learning environment. The emergence of this frame work made the greatest impact in the revolution of e-learning that take place in the all of the learning sectors since this framework, for the last 16 years, described all the education and learning process. Further, the framework also offered the logical base for all the e-learning instructional designers on how to design and implement effective learning environment in the e-learning process using the interactions afforded via computers and the internet, considering and stating all the factors that could affect the proposed designs. The Khan framework is still widely utilized until today (Khan, 2004, 2009; Khan & Granato, 2007).

And according to the results that we obtain it from a UoMust surveys and studying the Iraqi higher education status we find that the elements that to be considered in any framework design are:
1-Pedagaogical, 2-Ethical, 3-Evaluation, 4-Technological, 5-Interface Design, 6-Institutional, 7-Management, 8-Wireless Technologies, 9-Time, 10-Content Control, 11-Human Resources Capacity Building, 12-Evaluation , 13-Learner. as shown in figure .2.

The Khan framework was modified and a new e-learning framework was built for the UoMust with 12 dimensions as shown in figure .3.

The e-learning elements was divided into three main trajectories, and they are, 1- Technological, 2-Organizational, 3-Educational, and each trajectory has its own elements that related to its functionality and Characterize by its main mark.

We believe that learning is completely systematically operation because it's dealing with the humans whatever its type was, and any systematic operation needed to be stable from the beginning and starting to its final goal or end, and learning must be stable operation in all its steps or phases.

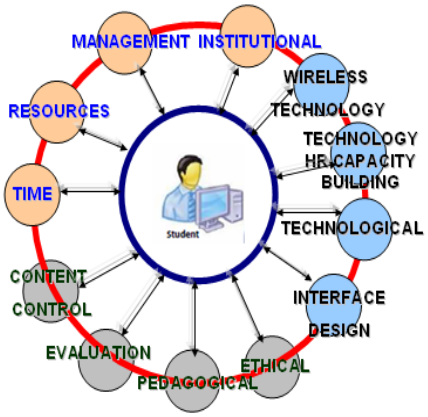

Figure 2: All e-learning dimensions and elements

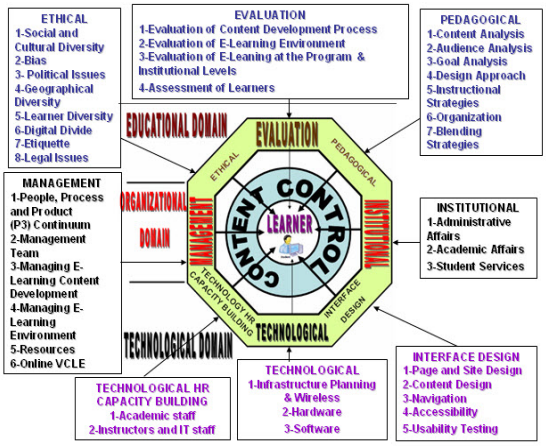

Figure 3: Modified Khan e-learning framework

In all the investigated models, we never found any model deal with this element that could effect and destroyed all the learning process because most of the designers are backgrounds are stable and consistent. In Iraq, it is a completely different case, and nothing is stable at all and small examples for that in Iraqi higher education undergraduate studies, they invent the third trial exams for whom that fail to reach the exam's rooms in the fixed time and date.

This is in the face to face traditional learning process, and more stability is needed in an electronic learning process. From that point of stand stability become a very important element if we are designing or trying to design e-learning or e-education activities in un stable countries where everything is not stable or going to be stable in the near future, and we also believe adopting such a stable framework could push strongly towards the stability of the learning process. We believe that the technological is the base and the foundation for our framework and for that we give this trajectory the main position inside the design and build all other elements according to its up to date new technological shapes after the ICT revolution which changes all old standards and concepts. These trajectory's elements are:

Technological Trajectory
The e-learning elements here must be scalable and stable and the elements are: Technology, Wireless technology, interface design, and technological human resources capacity building.
One computer to one learner is a very difficult formula to reach in any learning institution, especially with the same specifications.((Bielefeldt, 2006). Internet speed, or bandwidth, was a crucial issue for performance in large e-education networks. Studies have shown that the introduction of high-access computing can change the nature of instruction , and the strategies learned with technology may not be the same ones required for standard assessments of learning (Means & Olson, 1995).

"E-learning should ensure sufficient bandwidth is available to support the type of online learning applications being used and to ensure e learners have opportunities for face to face experiences in conjunction with their e-learning."(Ismail, Idrus, Ziden, & Fook, 2009).

ICT technology is the base for our framework, and it is the main trajectory that we build our system on it and without it, there is no e-education. In the Technological trajectory, we have four dimensions, and they are**:**

Technology
The technological dimension of e-learning examines issues of technology infrastructure in e-learning environments. This includes infrastructure planning, hardware, and software and according to that the changes in the education system in Iraq will be completely 180 degree turn, and everything will up to date and new. With considering that most emergent technologies are not widely having an adopted standard (hardware or software).

Human Resources Capacity Building
(MacDonald, Stodel, Hall, & Weaver, 2009) stated that if people did not have positive attitude, knowledge and skills of ICT, the e- learning program fails. Knowledge and skills have a direct impact on using e-learning. Since most of Iraqi universities suffers from the luck of required skills, (Elameer & Idrus, 2010), and we think Iraq needs to increase the believing in ICT which we think it will re shaped the education system completely.

Interface Design
The interface design refers to the overall look and feel of e-learning programs. The interface design dimension encompasses page and site design, content design, navigation, accessibility, and usability testing (((Khan, 2005; Rosenberg et al., 2007) and it is a very important element because it could be the way to the success, or they fail of any frame wok.

Wireless Technology
The growing development and application of wireless Information and Communication Technologies (WICT) opens new windows and opportunities for education improvement and redesigns the organizational and educational settings and shapes
To increase process polychromic, i.e., the possibility to deal with several tasks simultaneously. There is also a social context that includes different cultural formations, situations and moods, degrees of proximity and mutual recognition among people, etiquette and other elements that define what is or is not allowed in certain situations.

Organizational Trajectory
The e-learning elements here must be standardized according to the progressed university standardization and the elements are: Institutional, Management, Resources, and the Time. Furthermore, the organizational standard must be stable, and do not influence by the country or society changing winds only if it is to the better. The Stability of the universities is one of its basic academic characteristics, and we can find very clearly how the rules and regulations of the big names' universities like Cambridge, Oxford, UCL ,..etc. still same from long years ago and this a big indication for these universities organizational stability.

In Iraq the case is completely different and nothing is stable at all, and this comes from the changing of the regime in Iraq and missing universities stability come as a result for the country transform to the democracy. In the Organizational trajectory, we have four dimensions, and they are:

Institutional
The institutional dimension is concerned with issues of administrative affairs, academic affairs, and student services related to e-learning.
Resources

The resource support dimension of e-learning examines the online support and resources required to foster meaningful learning

Management
The management of e-learning refers to the maintenance of the learning environment and distribution of information and lack of ongoing support from management, failure to perform meaningful reviews to ensure an environment of continuous process improvement, etc.(Idrus, 2008).

Time
Time is considered a very important dimension in any innovative implementation of e-learning framework with considering the differences between the student achievement capabilities and the individualized differences, but we can keep time open without any upper limits or an end.
Availability of time must be adequate time and compensated time for users to become educated and skilled in how to use an innovation. This condition refers not only to the organization's willingness to provide time (such as paid time or release time) but the users' willingness to devote learning time to use the innovation.(Idrus 2008)

Educational Trajectory
The e-learning elements here must be modularized according to the Iraqi student's characteristics, and the elements are: Pedagogical, Evaluation, Ethical and the Content control.

In IT and in general Modularity definition is the property of the software (computer programs) that measures the extent to which programs or software have been composed out of separate parts called modules.
Modularity in learning is the same concept, and it is defined as the property of allowing to encapsulate, expose and separately reuse parts of a learning resource.
The framework has been designed to modularized the digital learning content, and it has been addressed as a part of the concept of learning objects.

The framework presented in this research can be used as the basis for a good foundation for modularization of the VLE. By modularizing the VLE, new functional components can be easily added in a way that makes them work as an integrated part of the overall learning environment.(Paulsson & Berglund, 2006).

In the Educational trajectory, we have four dimensions and as a word of the truth Khan 2009 framework had covered three dimensions completely, and we cannot find any missing element in his work in the field of pedagogical, ethical and evaluation as educational dimensions, but we also believe that content control should be added here as a new dimension to the educational trajectory.
With any technology, the effects on teaching and learning to depend on integration with curriculum and instruction (Bielefeldt, 2006).

Pedagogical
The pedagogical dimension of e-learning refers to teach and learning. This dimension addresses issues concerning content analysis, audience analysis, goal analysis, media analysis; design Approach, organization, and learning strategies.

Ethical
The ethical considerations of e-learning relate to social and political influence, cultural diversity, bias, geographical diversity, learner diversity, the digital divide, etiquette, and legal issues.

Evaluation
The evaluation of e-learning includes both the assessment of learners and the evaluation of the instruction and learning environment.

Content Control
The central ideology of learning theories is that learning occurs inside a person. Learning theories are concerned with the actual process of learning, not with the value of what is being learned.

In general content must be cooperative, collaborative and each learner has a learning path that caters for learners learning needs and interests in a productive. Students learn in differing ways and the manner in which information is presented to them affects their ability to learn (Kahiigi, Ekenberg, Hansson, Tusubira, &

Danielson, 2008). Students need to utilize the different learning styles interchangeably during the learning process in order for them to have an effective learning experience.

"Technology-enhanced student-centered learning environments organize interrelated learning themes into meaningful contexts"(Muniandy, Mohamad, Fook, & Idrus, 2009).
In order to achieve that (Moodle 1999) can help us and it are developed to facilitate the collaborative creation of content, organization, control and to manage the publication of documents in a centralized learner learning environment.As a final result the e-Learning context, advancement in network technologies, e-Learning technologies, and content development has facilitated multiple content presentations, personalization and ubiquitous learning. After studying each element and its direct effect to the student in the e-learning process, the framework was akin to the mechanics of orbital motion of the electrons that is moving in circular orbits at the constant speed around a nucleus, and when we finally understand the electron movement, we discover that each electron actually moves in a "wave pattern" where bodies (learning elements) with a slight difference en masse orbiting around a common barycentric (student as the core of the learning process). As such, the framework was reshaped into an orbit shape with the three trajectories and the design as orbital e- education framework.

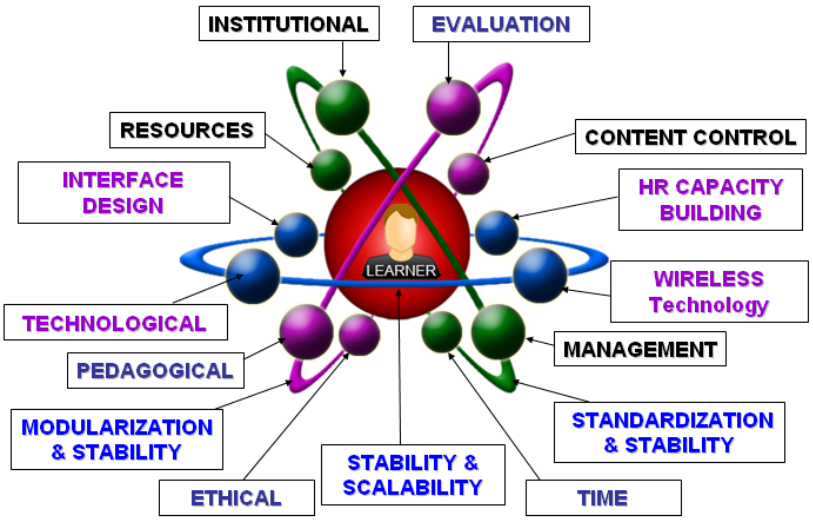

Figure 4 : ELAMEER-IDRUS e-Education Framework for UoMust

Advantages of Elameer-Idrus Orbital E- Education Framework
The instructionally designed orbital e-Education framework that will be used to digitize education activities and comprehensively covers all the education dimensions in UoMust is presented in Figure .4 with all the dimensions and sub-dimensions details. It has the following advantages:

1-The first framework that pays great attention to capacity building and ensuring well training for productive application
2-The first framework to study time. In the new world, time is money and in education we cannot keep it open freely without any control.
3- The first framework to study the up-to-date wireless technologies and their great benefits to the learning process. It is also the first to identify technology as a factor that can influence learning process or even end it.
4-The first framework to take modularization into consideration.
5-The framework could be useful and applied in any e-learning process, because we have taken into consideration the factors of M-learning, B-Learning and U-learning.
6-The first framework to take scalability into consideration.
7-The first framework to take standardization into consideration.
8-The first framework to take stability into consideration.

The Post-Evaluation Results
The results of the post evaluation for the new orbit model come in the highly positive side and (87%) of the academic staff welcomed the e-education orbit framework and encourage widely to adopt it and use it and (72 %) believe that it covers a lot of the e-learning area and then using of this framework in the higher education

come in the accepted zone with (69%). The good technological area in the orbit framework was completely in the positive side (excellent) and (92%) welcomed the strong technological domain in the framework. The solution of missing communications infrastructures by the wireless up to date technologies in the technological domain was very good grade (87%) and was welcomed. The managerial domain and its developed come in the accepted grade range (65%) and also the same for educational domain (67%). Human resources capacity building was also welcomed and come with (83%) in the zone of the very good grade and (75%) want the focusing of the HRCB to be on the senior academic staff. Furthermore, the VCLE was one of the e-learning components and (87%) welcomed adopting e-learning in UoMust need for a good video conference learning environment.

Distance education still away from the Iraqi higher education because of the luck information about it and its great benefits and the thinking about to certified distance education is come only with (65%) in the grade of accepted only and also the new mobile learning technologies are still also a way (60%) and in accepted grade and this result was completely known to us since the mobile technology is still at its first steps and mobile using was just allowed in 2004. The results obtained from the post evaluation are shown in table.1.

Table 1: Some of the result obtain from the post evaluation

Excellent 90-100	**Very Good 80-89**	**Good 70-79**	**Accepted 60-69**	**Poor 50-59**	**Very Poor Less than 50**

Statement	SA	A	N	DA	SDA	N	**MEAN**	**%**
UoMust need for a complete e- higher education system as the proposed	117	72	21	10	6	5	**5.146**	**86**
E-learning in UoMust need for a good MIS (Management information system)	89	95	5	13	4	25	**4.766**	**79.43**
Adopting e-learning in UoMust need for a good framework like the Orbit proposed.	147	49	12	6	1	16	**5.242**	**87.37**
Orbit framework covers all the learning dimensions in UoMust.	89	35	45	24	7	31	**4.354**	**72.58**
Developed the technological domain in the framework is important	167	47	10	0	0	7	**5.558**	**92.64**
Developed the managerial domain in the framework is important	67	40	29	44	9	42	**3.939**	**65.65**
Developed the educational domain in the framework is important	65	62	17	27	22	38	**4.03**	**67.17**
The wireless technologies and its progressed push it to play a big role in the learning process.	123	66	27	10	3	2	**5.255**	**87.5**
Adopting e-learning in UoMust need for a good human resources capacity building plan	143	37	16	5	11	19	**5.034**	**83..91**
Adopting e-learning in UoMust need for a clear and good step by step strategy.	144	23	27	3	7	27	**4.922**	**82.03**
Adopting e-learning in UoMust need for a good video conference learning environment (VCLE).	122	39	43	12	7	8	**5.00**	**83.47**
Orbit framework could be used in Iraq higher education universities	71	48	26	29	33	24	**4.099**	**68.32**
Wireless technologies are the solution for the Iraqi infrastructure problems.	34	15	72	76	26	8	**3.701**	**61.68**
Wireless technologies are the solution for the Iraqi funding problems and the lowest in costs.	18	17	167	6	9	14	**3.943**	**65.72**
Focusing on the capacity building for the senior academic staff is very importing factor in adopting it.	123	39	11	5	2	51	**4.352**	**75.54**
It is very important to build a clever e-gate for UoMust instead of the UoMust president news website	89	37	62	26	5	12	**4.619**	**76.98**
It is very important to design the learning materials to be used in mobile learning also	54	17	27	77	35	21	**3.632**	**60.53**

as future step								
Start thinking about to certified distance education is very important step towards develop UoMust	42	83	21	21	26	38	**3.913**	**65.22**
The proposed e-education for the UoMust is complete what it needed to install e-learning	62	47	51	34	17	20	**4.186**	**69.76**

CONCLUSION

In Taiwan, they start to build the intelligent class rooms "create an intelligent classroom embedded with individualized and interactive learning materials and assessment tools" , and in Iraq, we still after the wood blackboard .(Chang & Lee, 2010).

Dealing and designing for human beings is a very dangerous operation and to achieve it, all the elements of the design was studied very carefully and in e-learning we need to study a lot of different elements in its nature and try to find the correct formula for the best design and frameworks.

From 2003 and even before in Iraq, all these types of designs are done suddenly without any studying or planning and most of the decision makers are completely away from any kind of understanding the new learning theories and the impact of the ICT technologies in education and learning and still focusing on the chalk and talk as the best way of learning in face to face learning methods.

Khan framework was truly a revolution in the field of e-learning and for more than 16 years this framework is standing strongly in this field, and we hear from him two years ago how he designed his framework and added the eight dimension to his framework and our trial is completing what he had started, and we still believe in his framework and think it is one of the best frameworks but it cannot properly work in all learning different environments and as a word of truth as we stated we start from his framework.

At the end our framework becomes a completely different framework from Khan Framework with the similarity in some of the framework elements, and we believe that they simulate between the learner and any e-learning element is a very important and continuous operation.

After studying the learning environment and factors influencing the design we have a special framework for UoMust and the Iraqi higher education.

It was found that any e-learning project tries to complement the traditional way of face to face teaching method is best to be in a blended learning mode. To enhance the development of teaching and learning methodology through sharing of information on the latest pedagogical technique and delivery system for the students.

- Preferably to upgrade the ICT knowledge and skills in students and lecturers.
- Preferably to increased usage of ICT in educational management.

While the States of America fund the education sectors with huge numbers of the money to use up to date educational technologies(Executive Office of the President of the USA, 2010) , and the same in a lot of the other countries the Iraqi budget for education is still less than 5% of the complete Iraq budget and Iraq is a rich country and its budget for 2011 is more than 80 billion dollar. In States now days a lot of universities in its classic studies start to adopt at least one subject to be online and in Iraq, Jordan ,.. etc. we have still not accredited distance education.

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