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National E-learning Strategy to Enhance and Enrich the Iraqi Universities

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Nowadays, the HE (higher education) sector of Iraq has suffered severe disruption and mass destruction due to the war and, in general, only 10% of its remaining operational sectors are in the acceptable conditions. This research is an attempt to plan a PS (proposed strategy) for the Iraqi HE sector that can be executed easily in Iraq as a part of the rebuilding of the country and critical sectors, especially education. Before designing the PS, a specially formulated questionnaire using six-point Likert scale was distributed to 350 Iraqi professors and universities academic staff, and the results obtained showed that the problems faced in establishing such an e-learning network in the HE sector included missing infrastructure, well-trained staff, outside world help and the relevant budgets. A comprehensive e-learning strategy has been designed with models that were found through discovering the using of e-learning in one of the pioneers of distance education universities in Asia: the USM (Universiti Sains Malaysia) which has a complete e-learning system with a state of the art video conferencing delivery system and an electronic portal. This was complemented by the Badrul Huda Khan octagonal eight-dimension e-learning model. The educational activities were taken as a yardstick in the design of e-learning systems and educational activities for Iraq. The PS plays a major role in fixing an e-learning policy to the government and the ministry of HE in Iraq.

Keywords: HE (higher education), e-learning, infrastructure, e-learning model, education management, education policy

Introduction

Iraq is located at the heart of the world in the Middle East and bordered by Kuwait and Saudi Arabia from the south, Iran from the west, Turkey from the north and Syria and Jordan from the west. The Tigris and Euphrates are the biggest two rivers in Iraq. The last updated population in 2005 was 24,011,816 with an annual growth rate (2002 estimated) of 2.82%. Education is compulsory at the primary education level (aged from six to 12 and through six years), the secondary education level take six years before starting the tertiary level. Life expectancy in Iraq is 67 years.

Iraqi Higher Education

The higher education has a great effect on the society through policy-making, funding and planning. Iraq's universities flourished in the 1960s and 1970s and its free schooling system (Iraqi government invested huge amounts of fund in education in the provision of free education from the primary level up to the Ph.D.) also was long seen as a model of Arab education, fostering the strongest and most liberal educational system in the

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region “Higher education used to be one of the pillars that modern Iraqi society was based on, ever since the founding of the modern Iraqi country in 1921” (Paanakker, 2009, p. 7). The UN sanctions and total embargo imposed on the country in response to that have gradually isolated and impoverished the HE sector and has abolished much of its intellectual dynamism and independency (Harb, 2008, p. 1).

After the second gulf war in 1991, the Kurds in the north of Iraq have their own federal governorates under the name of Kurdistan Region or Iraqi Kurdistan and this region is officially governed by Kurdistan Regional Government (Website http://en.wikipedia.org/wiki/Iraqi_Kurdistan).

This situation is also continuous after 2003. Iraq enjoyed a long and proud tradition of distinguished universities, but the sequence of wars and UN (United Nation) economic sanctions in years (1991-2003) have severely damaged all the Iraqi HE system, and nowadays, in Iraq, we have Iraq’s current HE system (all Iraq Arabic governorates in the Federal Government without the three Kurds governorates) which comprises of 19 universities (philosophy of the government is the same during the last 20 years and it is the policy of establishing a university in each governorate responded to both the demands of equity and the growing demand for higher education, thus, three new universities were founded after 2003) and two commissions: Medical Specialization and Computer and Information, and the last is the Foundation of Technical Education which have 27 technical institutes and 13 technical colleges under the management of the MHESR (Ministry of Higher Education and Scientific Research) which is located in Baghdad (see Figure 1). These universities and structures included more than 200 colleges, 800 departments and 28 research centers. The Iraqi Commission for Computers and Informatics offers specialized course for postgraduates in ICT (information and communications technology). There are in addition 15 private colleges offering programs in computer sciences, business administration, economics and management (Harb, 2008).

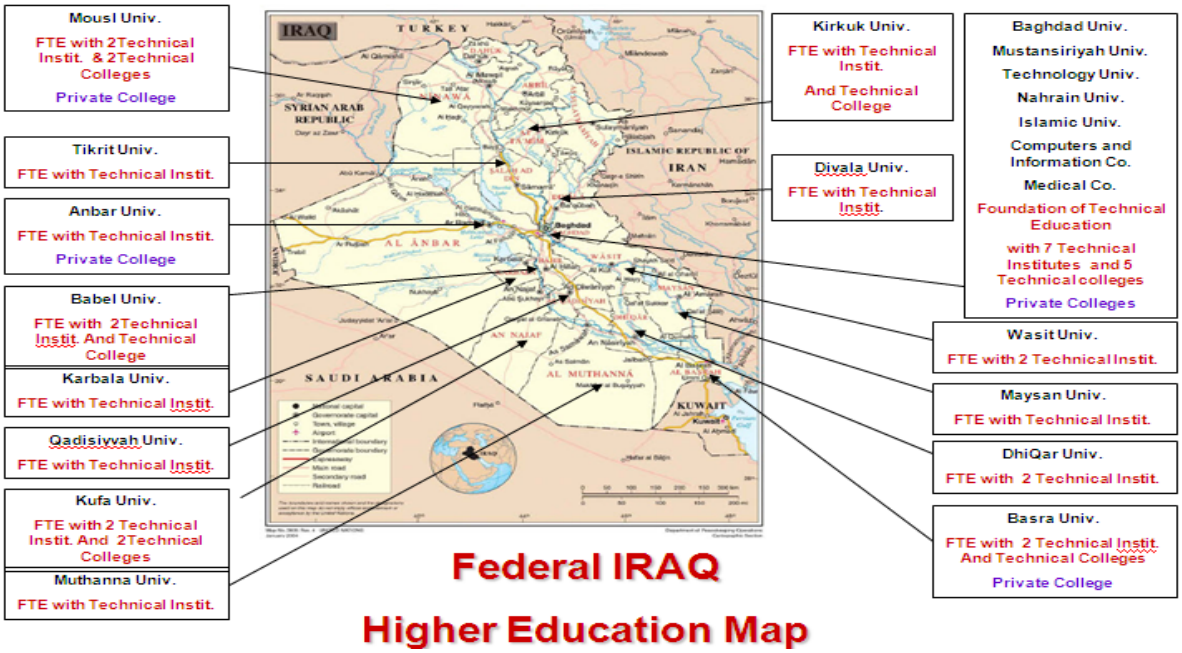

Figure 1. Iraq HE map and the location of the universities.

In our study, we focus only on the Federal Iraqi Area which is all era of the Iraq without Kurdistan Region, because they are another case and do not suffer from what the people of Iraq suffer under the wars and UN

economic sanctions.

Iraqi HE After 2003

After the devastation of most of the Iraq facilities and infrastructures following the United Nations Security Council economic sanctions (from 1991 to 2004) and the last gulf war in 2003, the whole of the country's infrastructures was affected and damaged (On March-April 2003, the war started on Iraq and delivered nearly 1,750 tons equivalent to 400,000 a nuclear bomb similar to the bomb dropped on Nagasaki Japanese and the equivalent of 5.5 times as much as the quantity, which was thrown in 1991 in the first Gulf war in Iraq) (Website http://www.middle-east-online.com/iraq/?id=93739); the HE sector, directly or indirectly, disrupted the primary, secondary and HE activities.

After April 2003, the demand for all types of HE (Bachelors, Masters and Ph.D.) in Iraq has increased as a result of the social development process, particularly due to the increase in family's incomes and the re-growth of the Iraqi economy. However, there were many sectors that suffered technical, secure, violence, political and financial problems, which delayed the construction, rebuilding, rehabilitation, capacity building and provision of the necessary requirements and supplies (Paanakker, 2009).

The traditional approach of managing the HE sector has been rendered useless in the need to rebuild the educational environment with high academic standards. E-learning was identified as a student-centered approach to teaching and learning and required a conducive and good ICT infrastructure, communication technologies to build a rich learning environment.

Main Challenges to Iraqi Academics Since 2003

Hester Luna Paanakker (2009) stated in her thesis "Higher Education in Iraq under Attack" that:

(1) HE in Iraq decrease of professionalism (71%);

(2) Universities academics take-over by political parties and militias (63%);

(3) Universities educational infrastructure brain drain of highly-qualified academics low (38%);

(4) Iraqi degradation of HE (75%);

(5) Low security due to the specific targeting of academics (63%);

(6) Sectarian or politicized HE (46%);

(7) The de-Ba'athification or unemployment (29%);

(8) One cannot use any kind of educational technologies in all education sectors, because there is no real communication infrastructure and most of the Iraqi used wireless networks and mobiles to communicate and the government does not reinstall the cabling systems and fund for its repair even though they are old systems and networks;

(9) Computers and its accessories have been around since 2003 and are now out-dated;

(10) Iraq HE sector suffers from the same problems as all other sectors do that facing all Iraqi people and sectors' real needs is to find who plan and can execute big projects;

(11) Most of the Iraqi HQ (Iraqi head quarters) systems are lacking in experienced personnel even in the HE sector;

(12) The overall investments dedicated to the Iraq education sector in the year of 2005-2008 reached 1,723.60 billion dinars (1.39 billion dollars) and a budget of 832.41 billion dinars (0.67 billion dollars) for HE is very low and not enough (Bank, 2009).

How to Enhance and Enrich the Iraqi Universities

The knowledge revolution at the end of the 20th century, and above all in the field of information technology, has brought society to the threshold of a new age and there existed a triadic relationship among knowledge, development and freedom (MBRF and UNDP, 2009). Enhancing HE in Iraq will give the opportunity to reduce the violence and it is a major part from the rebuilding this country towards the progress and better future, but leaders did not know that or pay the required attention to that. There are a lot of examples in the world we can state.

The Iraqi academics have proven from the years of 1980 to 2003 that they are truly hard workers and have the capability to work under very difficult conditions, but they are unable to address the forthcoming probable problems as they are lacking in tools and experience to provide a forward-push to HE.

The utilization of educational technologies is identified as a solution to enhance HE in Iraq. It has been proven that the systematic and planned use of educational technology will have a great influence to effectively provide the impetus in the infrastructure of the university to provide e-learning.

E-learning can be defined now as Badrul H. Khan viewed:

> 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. (p.46)

In 2008, in Arab middle east countries and Iraq, it has been recorded levels of development in technological performance exceeding those observed in all other regions of the world but the problem its used randomly without planning or achieving goals from this using or performance, especially in education.

E-learning Constraints

The main constraints that facing establishing e-learning projects in Iraq are (as shown in Figure 2):

(1) Financial constraints: At the end of April 2003, Iraq was only ruins of destroyed buildings and most of government departments and bodies have been stolen completely and burnt, such as the museums, universities, libraries, electric and factories, even oil industry and refineries. Iraq is known as the country of oil and agriculture, and in general, Iraq's economy depends on oil imports only because the agricultural sufficiency is not in full of the Iraqi people's requirements.

After the return of Iraq to the international community and after years of long blockade on the people's bloody wars fought by the old regime in Iraq, this return, unfortunately, was not easy and not welcomed because it was returned with huge and heavy debts which made the return of the Iraqi economy and its growth restricted and definitely too slow.

The reconstruction of HE requires substantial big money amounts, in particular, most universities depend on the governmental financial sources, but the government budget is not enough now and the ministry with its heavy cover over universities restricted heavily enumerates all cultural and scientific activities, and trade under its auspices direct and under the title fights against corruption and integrity and impedes universities to find other resources to finance its activities and the development of its facilities.

For that, most of the reconstruction operations in this sector was only the reconstruction of buildings and processing furniture, without focusing on ICT and other scientific matters, such as laboratories and organs of modern computers and server, books, reference sources, etc.. The Iraqi universities are still looking into who can save them, despite of the passage of more than seven years. The international organization and the UN and others NGOs (non-governmental organizations) estimated that Iraq needs 300 billion US dollars for a

complete reconstruction and rebuilding this country again and the United States have spent about 53 billion US dollars alone till now (Website http://www.sigir.mil/files/audits/10-011.pdf, http://www.coe-dmha.org/HARIraq.cfm);

(2) Ethical and legal constraints: Iraq is the country of the one ruling party and the source of legislation is one person. Suddenly after 2003, everything changed and we find that Iraq has become a federal country with multi-parties, races and languages, and a step is fully valid and correct, but not by the way in which carried out in Iraq. Now, there are many parts of the legislation and many of the legal authorities and all have the capability of the issuance of laws (the Federal Court of Iraq, the Prime Minister, The House of Parliament, etc.), although they said that the House of Parliament is the source of legislation alone but this is not true. Changing the laws and regulations of a country with more than 86 years of history in full is not a simple operation and it needs as expected to long years to reach legal stability.

In 2008, they issued a new law for the academics service and they did not make any difference between the academic degrees in the salaries (professor, assistant professor and lecturer) in the new law. Also, till now, the lack of academic freedom has come repeatedly to the fore and it has been hinted at it is a phenomenon of great importance. However, academic freedom deserves some specific attentions and it needs for issuing a specific law for it. For example, the number of the control and finance monitor bodies operating in Iraq is more than five governmental organizations clear overlap among its works. However, Iraq under UN statistics among the ranks of the states is most corrupt;

(3) Technological constraints: Iraq, after April 2003, has been without any infrastructures in any area of the services and in the areas of information and communication, because of the thousands of bombs dropped on Iraq, which destroyed all the Iraq infrastructures and the rest, the sabotage that followed the war terminates it completely.

Although as a part of rebuilding this country, thousands of computers and a lot of others types of technologies were introduced to Iraq after 2003, but did not operate in the correct format or way and invest its advantages for the lack of necessary infrastructures.

Universities are still experiencing a shortage of the numbers and types of computers, servers and peripherals, lacking the existence of networks of computers in every Iraqi university even at the level of scientific departments, and also, there is no central HE network linking universities among themselves or linking universities in the ministry.

Poor, weak and bad provide Internet service in Iraq in spite of prevalence and there is only a name for Government Company to Internet service without any real action. Although the Internet had arrived to all the Iraqi houses by the private sector that provides shared service within 30 US dollars monthly. We can say that Internet culture increased very largely as the number of mobile phone users in Iraq jumps to more than 20 million at a rate of about 70% of the Iraq population and number of three companies works in that but with second generation. Those companies did not support the communication sector or education sector, for example, a mobile company called Zain working in Bahrain and Iraq established Zain e-learning center in University of Bahrain while it did not do anything in Iraq, despite of the fact that the size of their work in Iraq is bigger more than twice their work in Bahrain. Ministry of Communications also suffered from various problems;

(4) Socio-culture constraints: Educational institutions in Iraq are understandably greatly influenced by the political, social and cultural environment in which they are situated and play a large role both in passively

undergoing or reflecting these conditions and in actively shaping them, either positively or negatively.

The functioning of educational institutions is a reflection of these larger societal conditions. Understandably, conflict has a huge impact on the way in which the system is run and on how well it is able to keep functioning. There are several ways in which conflict is detrimental to education.

It disrupts the social structure of society, leading to the forced displacement or even death of teachers and pupils/students, or to losses within families that force pupils/students to contribute to the household or other income generating activities rather than attending school (Novelli & Lopes Cardozo, 2008, p. 478). A decreased security situation makes it difficult to reach school safely or sit through class safely (Buckland, 2006; Wright, 2006). Conflict undermines this foundation and also contributes to the conditions that perpetuate violence (UNDP, 2005, p. 159);

(5) Human resource constraints: Iraq have a great wealth of humans and great experience people, academics, engineers, etc., but unfortunately, the circumstances passed on Iraq, with the security deterioration, missing that has occurred, the continuation of acts of violence, bombings and displacement killing for the identity, paid a lot of those recent great brains to leave Iraq and pushed them for migration to other countries in search of a better life and stability without the desire to return to Iraq once again. The rest of them were within the circumstances of the blockade and discontinuation of the world, therefore, capabilities need to be developed and capacity buildings for them are an urgent need according to studied plans and international organizations, such as the UN, USAID (United States Agency for International Development), EC (European Commission) and other international organizations involving in the reconstruction of Iraq's capabilities. A lot of capacity building programs have executed, but the results are still far away and far from each ambitious after more than seven long years;

(6) Institutional constraints: The lack of regulations and proper plans have now become the hallmark in Iraq, because most of the government departments and bodies in structure in Iraq wok within old standards and most of them still work with the laws of very old ones up to 1940s of the last century and even before when announced the formation of the Iraqi Kingdom in 1921. These governmental structures must be restructured again with the institutions concepts and work with technologies and by MIS (management information system) in order to keep pace with the times and the new century and developments. Most of the politicians in Iraq talk about building Iraq with institutions' concept, but nothing takes place or occurs in the ground.

This concept "Country of Institutions" is a new term fully on the Iraqis who adopted without the knowledge of the meaning of these terms added to Iraqi recently, especially for administrative and managerial employers, and now in Iraq, most of the universities miss the complete independency (Ministry of Higher Education in Iraq speech on Monday, June 14, 2010) (Website http://radionawa.com/ar/News Detail N.aspx?id=18360&LinkID=158). A lot of the leaders in Iraq are obliged to leave their managerial positions under the designation of favoritism or loyalty to the former regime, uprooting Baath (de-Ba'athification process) or accountability and justice laws, and as a result of this situation, the government starts unloading or brought new staff without any experience and handing them over to continue the public works, and most of them do not handle even the minimum requirements for these positions;

(7) Planning constraints: Iraq is in real shortage for planners and designers who can make a road map for executing projects with the new international standards. The planning for projects in wars' conditions needs for highly experienced expertise that knows the conditions very well not outside Iraq. One of the big mistakes of the Iraqi is that they relay on the UN and WB (World Bank) expertise to plan and design for them, most of

whom have not visited Iraq before. Planning for e-learning projects in Iraq is not a case of bringing computers and servers in Iraq this year, but a long term plan that needs a road map to do it starting with policy reform and development, universities developments and changing its old standards installs real infrastructures and reforms or upgrades that on the ground, and at the last, plans a complete plan for capacity building as stated in Figure 3.

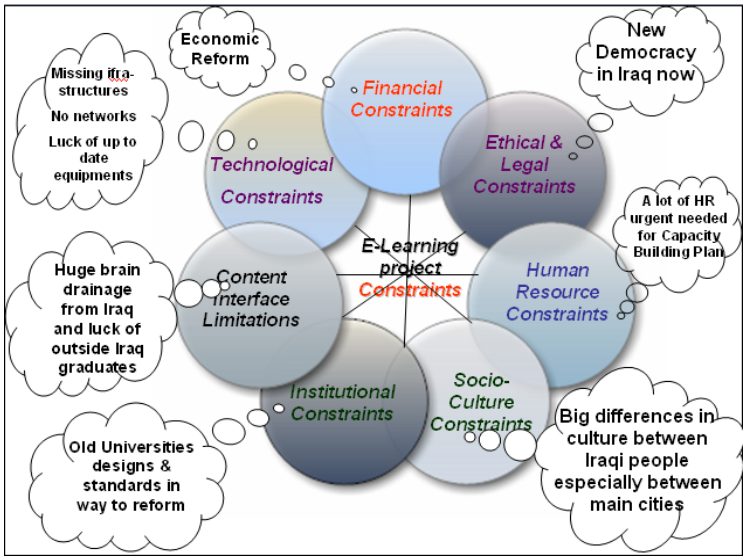

Figure 2. E-learning constraints in Iraq.

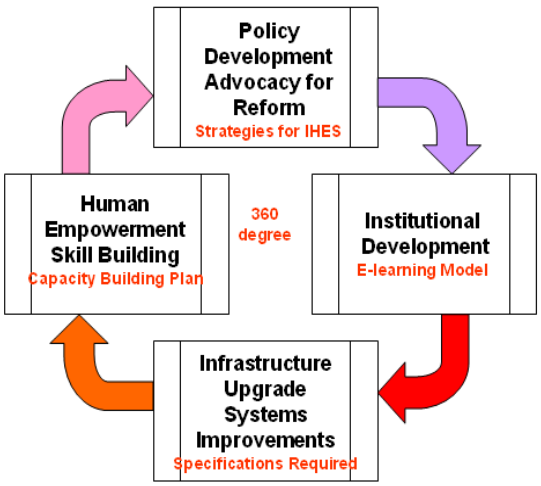

Figure 3. Road map for e-learning.

The Statement of Purpose

During his speech in the USM, Prof. Datuk Dr. Md. Zabid Hj. Abdul Rashid (2007) of the University Tun Abdul Razak Malaysia said that ICT provides technological modes of learning and vehicles for borderless education and training. Intensified e-learning is a complimentary mode of learning. Establishing an e-learning system in the Iraqi HE sector is the focus of the research, the need for the information about e-learning including the science information about the e-learning strategies, theories, models, systems, software engineering, computer networking, Website development, CBT (Computer-Based Trainings) development, e-learning and education networking, building capacity and the management of e-learning. The goal of the

research is to propose a national e-learning strategy for Iraq to enhance and enrich the Iraqi universities.

The E-learning Model

An e-learning strategic approach has been proposed to leapfrog and address the educational needs and challenges in the present time. A model of the combination of Badrul Huda Khan octagonal eight-dimension e-learning model and 60 sub-components' frame work (Khan, 2004; 2005; 2006) with the school of distance education in the USM e-learning system, which has a complete e-learning system with a state of the art video conferencing delivery system and an electronic portal designed by Moodle software, was proposed after development for the HE sector. The model was completely accepted by Iraqi academic staff to stimulate the Iraqi educational society in executing their academic duties (see Figure 4).

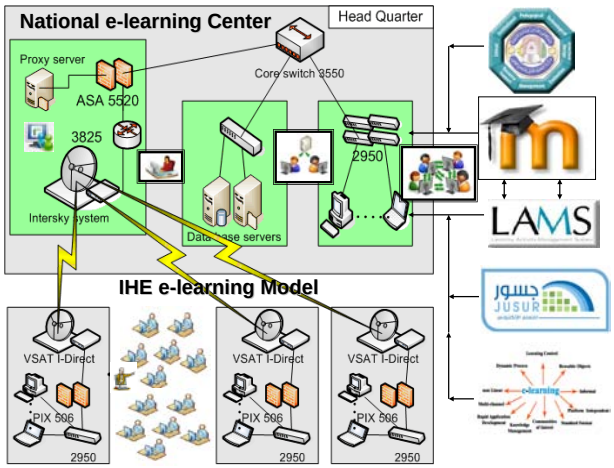

Figure 4. The proposed e-learning model for IHE

Methodology

The ADDIE (analysis, design, development, implementation and evaluation) model was utilized in the study. A specially formulated questionnaire was designed and distributed between a group of Iraqi university staff to investigate the direction towards the e-learning, management and institutional problems which were the basic elements of the proposed strategy and that could face the implementing e-learning projects, the benefits that would be gained to the HE sector and the technology problems. The research framework is given in Figure 5. Attention was accorded to the Malaysian national e-learning strategy which proved to be a successful strategy among other countries from middle-east or Islamic developing countries.

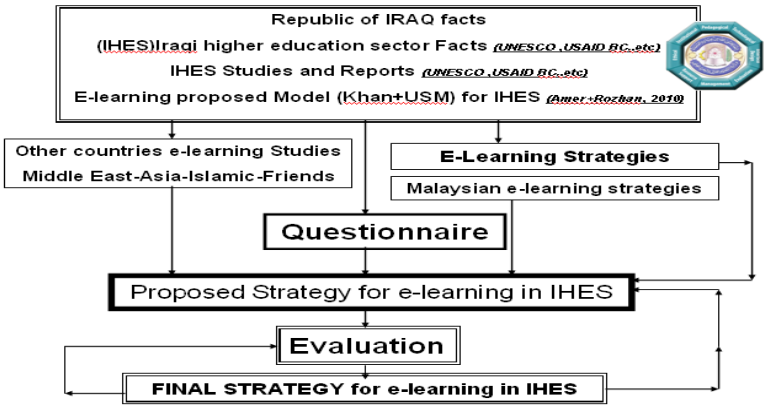

Figure 5. The research framework

The Instrument

The statistical procedure and the data analysis was 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" (p. 34). 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 and the second included the targeted questions divided into five categories of management, institutional, technology, human resources and general.

The questionnaire was distributed to 350 academicians from the Iraqi academics staff, but the completed feedback were received from only 287 respondents comprising of 131 males and 156 females, 189 Ph.D. degree holders and 98 Master degree holders, and 35 of them are professors, 95 assistant professors, 111 lecturers and 46 assistant lecturers and only 25 of them are without enough skills in using computers. The other group's general information is shown in the Tables 1, 2 and 3.

Table 1

Computer Skills Distribution

Computer skills	Number
Advanced skills	12
Skillfully	84
Fair	166
Low	2

Table 2

Work Experience Distribution

Work experience	Number
2-5 years	32
6-10 years	60
11-15 years	50
16-20 years	95
21-25 years	47
More than 25 years	3

Table 3

Age Distribution

Age	Number
25-35 years	66
36-45 years	169
45-55 years	45
55-65 years	7

Statistical Procedure

All the statements and feedback were analyzed and computerized using the SPSS (statistical package for social science) to obtain the *M* (mean), *St. D* (standard deviation) and percentages (%). A Likert scale of six points was used (Gelin, 2003) including: SA ("Strongly agree")-6, A ("Agree")-5, N ("Neutral")-4, DA ("Disagree")-3, SDA ("Strongly disagree")-2 and DK ("Do not know")-1 (Mohammad, 2008; Kaghed & Dezaye, 2009).

Results and Discussion

Table 4 shows the questionnaire's statements and the *M* results of the study. The results showed that there was a big motivation towards the e-learning from the university academic staff and also showed that there was a big fear from the technological aspects (M = 3.121), because there were no infrastructure or networks that could be used in e-learning activities. The result showed that the universities still upheld old practices and needed to be changed quickly.

The universities' budgets were not enough to implement the e-learning projects and the classrooms were still old and were not provided with any educational technologies, with face-to-face being the prominent way of teaching. It also showed that the management needed to use up-to-date technologies and ICT in universities. The Ministry of Higher Education needs to pay more attention to establish computers networks between Iraqi universities and the HQ of the ministry and ministry directorates. The universities have inadequate Internet and most of them have Websites, but these sites are static and not interactive sites and are not useful for any educational activity. There is a huge need for a complete building capacity plan that can cover all technological needs. There is a strong believe that connecting Iraqi universities to the international world universities is the best for implementing e-learning projects.

Table 4

Questionnaire Statements and the Mean Results

Statement	*SA*	*A*	*N*	*D*	*SD*	*DK*	*M*	*St. D*	%
Establishing e-learning networks in the Iraqi universities can develop these universities.	213	59	10	2	0	3	5.65	0.74	94
Using e-learning can develop the HE sector in Iraq.	230	43	8	2	0	4	5.70	0.76	95
E-learning can solve the problem of brain drain.	110	143	14	0	0	20	5.05	1.24	84
Establishing the e-learning networks can support the universities professors in their duties.	158	104	6	12	1	6	5.35	0.99	89
The universities can accept using e-learning as a tool to developing.	175	91	5	11	1	4	5.44	0.91	90
The Iraqi HE regulations are good now to establish e-learning networks and start using it in the education process.	30	42	70	99	42	4	3.66	1.23	61
It is useful for the HE sector in Iraq to establish and start distance education studies.	56	54	64	46	48	19	3.88	1.54	64
Distance education can support the believing in the e-learning.	51	57	61	31	15	72	3.58	1.82	59

Changing the traditional post-graduate studies systems and certifying other systems like research programs and modes is a way to increase the education effeminacy.	135	17	43	45	44	3	4.50	1.59	75
The universities budgets are enough to develop the Iraqi universities.	43	66	17	53	20	88	3.28	1.88	54
All the universities are atomized by ICT.	7	13	129	19	116	3	3.18	1.12	53
It is better for the universities to establish and install its own networks by its technical staff than referring to the outside universities companies.	13	23	25	15	208	3	2.63	1.20	43
It is better for the universities to find a kind of relationship with the big names of ICT companies like Microsoft, Cisco, etc..	226	15	18	20	1	7	5.47	1.15	91
It very important to stop any kind of illegal dealing with software for the using of the ICT.	22	29	138	56	8	34	3.64	1.28	60
Encouraging the Iraqi government to announce the law that protects the authors from stealing their offers especially in ICT.	251	7	13	0	0	16	5.60	1.20	93
There are a big numbers of computers, computer labs and internet connections in all of the Iraqi universities, and there is no leakage in this field.	13	26	28	24	190	6	2.71	1.23	45

(Table 4 continued)

Each staff has its own computer for its daily work and it is connected to the main university network.	4	4	16	48	201	14	2.32	0.82	38
All the Iraqi universities are connected in one HE network.	0	0	45	136	102	4	2.77	0.72	46
All the Iraqi universities have its own wireless network and it is with a good bandwidth.	0	0	47	152	85	3	2.84	0.69	47
There is a good electronic and virtual library inside each school and department instead of main big library supplied with all ICT needs.	0	20	78	21	166	2	2.81	1.05	46
All the student affairs and academic achievement works are atomized f using ICT.	0	0	17	126	136	8	2.52	0.65	42
All the academic universities staff of science works are likely to be done with ICT.	35	175	12	13	30	22	4.36	1.45	72
All the Iraqi universities work very hard to shrinkage the gap of the technology with outside global world and they are doing well.	245	17	3	22	0	0	5.69	0.83	94
All the Iraqi universities cancel the using of the traditional wooden boards in the class rooms.	79	130	8	3	0	67	4.29	1.89	71
All the universities have a clear strategy for developing their universities and reducing the gap with the international universities standards.	245	17	3	10	10	2	5.64	1.01	94
All the Iraqi universities have a clear and transparency educational strategy for the next years in the new Iraq.	245	17	3	10	10	2	5.64	1.01	94
All the universities have design its instructional environments according to the international standards.	25	7	113	53	86	3	3.38	1.21	56
All the Iraqi HE institutes are well structured foundations according to the international universities standards	24	23	39	19	143	39	2.77	1.48	46
It is best to use one system for students' registration in the Iraqi universities.	191	9	17	26	40	4	4.95	1.60	82
It is better to link the Iraqi universities to an international e-learning network till establish a domestic e-learning network in Iraq for the HE sector.	187	30	18	4	45	3	5.04	1.53	84
It is important to design universities Websites similar to international universities and especially in using of e-learning and e-gates.	179	37	9	33	24	5	5.04	1.46	84
It is very difficult to try to install e-learning system without international help.	46	69	14	73	79	6	3.69	1.52	61
The first step for any using of educational technology in the Iraqi universities is to supply all the class rooms with updated technologies.	215	40	19	8	2	3	5.56	0.91	92
It is very important to push the universities academic staff to use the educational technologies in the learning process.	217	23	26	6	15	0	5.46	1.08	91
I believe that e-learning is the future of the learning process.	197	4	19	22	39	6	4.97	1.62	82

I believe that e-learning should be adopted by the ministry of HE and the universities head quarters and we should work towards making it success.	67	63	41	34	77	5	3.97	1.58	66
I believe it is very important to send the professors and lecturers to outside Iraq universities to see the e-learning and other technology and how they used it	287	0	0	0	0	0	6	-	1
Universities have to encourage their professors to do researches in and about e-learning in Iraq.	45	93	16	50	78	5	3.86	1.53	64
Centers of educational technology must pay more attentions into using of e-learning and monitor the universities profess in this field.	225	19	8	12	6	17	5.37	1.40	89
There are many providers of e-learning materials in Iraq.	0	0	7	140	17	123	2.1	1.00	35
There is a wide area of freedom in Iraq and there is no limit against any kind culture or science building.	287	0	0	0	0	0	6	-	1
It is better to establish e-learning centers in all of the Iraqi universities.	194	18	53	6	7	9	5.25	1.26	87
It is better to ask the UN/World Bank to help the Iraqi HE project for establishing e-learning network.	213	11	15	3	32	13	5.15	1.59	85
The Malaysia e-learning experiments are one of the best ones in the entire world in this field.	21	6	25	46	11	178	2.06	1.57	34

Role of the Ministry

The results showed that the onus is on the ministry to take the first step towards establishing e-learning practices in the universities. This is followed by the feedback from the academics that e-learning must be adopted by the ministry. They also believed that e-learning could help develop the HE sector in Iraq (M = 5.7), and it would provide assistance for the senior academics and professors in their academic duties (M = 5.3).

Since the ministry plays a major role in the HE sector, they are also encumbered with establishing networks among the Iraqi universities as well as furnishing university classrooms with the relevant hardware and communication systems.

Role of the Universities

The results showed that the traditional teaching and learning approaches were still prevalent and any notion of e-learning was not forthcoming. There is also a need to put in place the appropriate technological needs in the classroom, such as TV, projectors, computers and an up-to-date library system.

After six years of freedom, the universities still have an uphill battle to attain international standing and most universities have budget constraints. At best, most universities have Websites that are only loaded with pictures and a message from the President.

International Help

Feedback from the respondents indicated that it would be better to link Iraqi universities to international e-learning networks since there are no e-learning providers in Iraq (M = 2.1) and to create e-learning centers in all of the universities (M = 5.2) to be the connecting point to facilitate for a uniform course delivery. It also showed a strong believe that UN/World Bank should help the Iraqi HE especially with the human capital in terms of a good planner and project managers.

Capacity Building

It is a standard requirement for any e-learning projects to include a special ICT training plan for the universities staff. Results also showed that there is a need to cater for the needs for training among the academic and the understanding of the ecology of e-learning.

Proposed Strategy

There are many ways of using the electronic technologies in education, but for Iraq, the best is using the technologies to support or supplement the classical face-to-face learning methods and also integrating online activities to strengthen and enhance the learning process (Abdul Karim, 2004).

From this stand point, a strategy is designed according to some of the East Asian countries experience in this field (Masami, 2006), especially the countries where their conditions are similar to the conditions in Iraq, such as Cambodia (Chanthan, 2006), Vietnam, South Korea, Thailand (Pineda, 2009) and Malaysia (Abdul Karim, 2006). Mishra (2007) also mentioned that e-learning in India is still at an infant stage.

The strategy framework has the potential to guide the MHESR to:

(1) Develop a national e-learning programme;

(2) Establish national center of e-learning;

(3) Analyze current regulations of distance education;

(4) Formulate e-learning policies;

(5) Formulate e-learning technical standards;

(6) Formulate e-learning instructional standards;

(7) Formulate e-learning disability standards;

(8) Develop accreditation criteria e-learning programs;

(9) Establish research funding criteria for e-learning projects;

(10) Establish national digital library;

(11) Establish e-learning faculty and staff training.

The strategy framework of the e-learning in the HE in Iraq can be focused on three main thrust areas as follows:

The first thrust is the government where a supporting role would play a major part by partaking projects in supplying the required funds and policies that can help the full adoption of e-learning, such as the establishment of an Iraqi commission of e-learning. Regulation and certification of e-learning and distance education should also be addressed. Generally, it seems that the government still focused on rebuilding for the face-to-face traditional methods of learning;

The second thrust is the MHESR and its role is to emphasize the role and the function of ICT in HE as a learning tool and formulate the technical and instructional standards for it. Establishing e-learning network among Iraqi universities is to establish a main e-learning center in a similar way to the Iraqi commission of information and computers in each university;

The third thrust is the implementation area which emphasizes the technological aspects by strengthening or installing networks for students and academic staff, building new labs and Internet cafes, supplying the Internet to cover all the universities areas and providing all the classrooms with all update IT supplies, such as computers, data show and smart boards (Brandon, 2007).

Capacity building and the responsibility here are the sharing between government and ministry and the required budget for training. Universities must be given priority and the freedom to plan and train the academic and support staff according to its own need abolishment of restrictions on ICT up taking and increasing the use of technology in university management, academic affairs and daily works so that they can be more efficient and productive.

The proposed strategy flow chart is summarized in Figure 6.

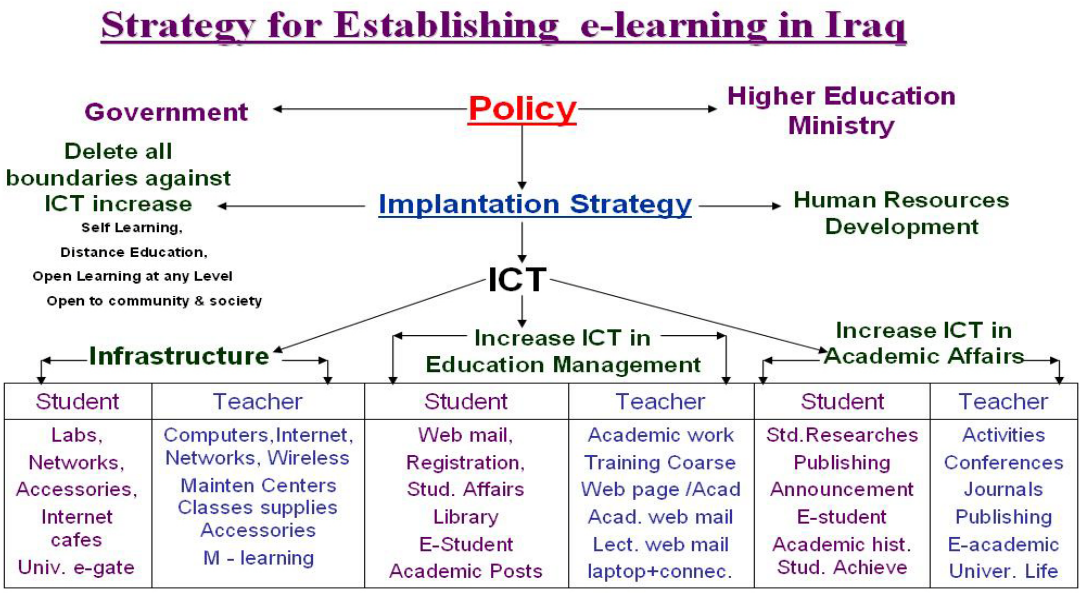

Figure 6. The proposed strategy flow chart.

The first phase of the strategy would be to establish a national e-learning programme for the Republic of Iraq and this programme will be from the MHEDSR responsibilities. For financial reasons, the programme must be under the control of the minister's cabinet and the technological support under MHEDSR. Research has shown that e-learning will never be successful without a supportive climate for learning and strong management support (Marc Rosenberg, 2010).

It is important that the e-learning center must be a completely independent center with high standards and clear duties to inculcate the e-learning culture and the benefits that could be gained from the e-learning (Brandon, 2007). The lack of academic freedom has come repeatedly to the fore and it has been hinted as it is a phenomenon of great importance (Paanakker, 2009). The academic staff should also be sent for training or further studies like joining international conferences or studying tours for human resource development to address the needs of the country.

Conclusions

Strategies must be based on prevailing conditions and existing institutions, and preferably be developed by in-country researchers and policy-makers. The main problem in Iraq after a long time of seven years is the lack of and brain drain of planners and designers. Many skilled personnel have left Iraq after more than 30 years' continuous wars. Further, they did not express any desire to return after securing a better life in their new location. The new planning personnel were shocked at the extent of destruction in the infrastructures for electric, water, communications, oils, etc.. HE is one of the most damaged sectors. Rebuilding projects have started since 2004, but it is still in an infancy stage.

Strategic decisions taken in many Arab countries have given the greatest share of attention to infrastructure issues and legislation and have not given equivalent attention to issues related to applications, digital content and development of the use of the Arabic language on the net.

In the last quarter of a century, Arab states have achieved remarkable progress on all indicators used to gauge the dissemination of knowledge among their people, from lower illiteracy rates to higher numbers of

university graduates.

Some Arab countries are in the top third of countries in the world with respect to a number of ICT indicators, but the Arab country with the highest levels of internet use ranks only 38 with respect to Internet for education using and other kind of using.

In today's changing world, the idea of internationalization of HE, especially in developing countries, has been deduced from globalization of education process. The international aspect of HE is becoming increasingly important, composite and confusing (Akbar Zolfaghari, Sabran, & Ali Zolfaghari, 2009).

Iraq, as one of the Arab countries, has made noteworthy progress in most of the pivotal aspects of ICT. There is a great perception that most of the Iraqi problems can be solved by technology and ICT. In HE, it is very important to give the attention to all educational technologies with specific centers to implement e-learning as most of the senior Iraqi academics are asking for educational technologies and e-learning.

National e-learning projects should be done after studies for the international universities programs, such as in Malaysia (Asirvatham, 2005; Idrus, 2006), where national pilot projects are conducted the process prior to its implementation. We emulate the Malaysian e-learning experiment, because it is at the forefront of e-learning in Asia as "The evolutionary nature of technological infusion into the education system in Malaysia is very much a planned approach, and advances in ICT has hastened the pace of nation-states to develop a world-class quality education system" (Idrus, 2006, p. 4).

There are many critical factors to be considered in any planning for e-learning strategies, and in our strategy, we cover the rules and policies, infra-structures and the technical support, capacity building and training, universities' standards and researches' output of the project. Most of the e-learning projects in the Middle East and gulf zone or even in Africa are still in the early stage (Unwin, 2008).

Advancing infrastructures and up-to-date hardware is one of the keys to the success of e-learning on the continent, but there should be a special ICT and e-learning capacity building for universities' governance and management of Iraqi universities (HQ), and it is very important and it must take the priority and they must believe in that.

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