

The performance of Higher Education Institutions in Iraq and key recommendations

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Abstract

The Higher Education Institutions (HEIs) in developing countries are challenged by rapid technological change and increased demand on skilled and qualified workforce. (HEIs) involve universities, colleges, institutes, research centers. These activities should be worked out together in order to access to the progress in the daily life and for an institute to be successful.

Thus, HEIs is an essential tool at transforming societies by educating leaders, decision makers, entrepreneurs and academic stuffs. It is widely accepted that a sustainable and healthy economic development is no longer depending on the natural resources, but also on the human resources, their knowledge and skills.

Therefore, there are serious concerns about the decline in educational levels in Iraq. There is no doubt that Higher education and scientific research are lag behind the higher education of the world, this is because of several issues such as; centralized education system which is a remnant of the previous regime, old teaching method, inconsistent curricula, poor efficiency of management of Ministry of Higher Education and Scientific Research (MHESR). All these issues influence the knowledge product and weaken the university's participation in the building of society.

The main objectives of this study are to examine the pattern of Education System (ES) in Iraq and its characteristics. Then, it critically reviews the performance of Higher Education and Scientific Research (HESR) in Iraq and Kurdistan region in last three decades. This study also identifies the current challenges confronting Iraq's Higher Education and its institutions. Eventually, based on these discussions, key recommendations are provided to conclude. Due to data limitation, this research has adopted a qualitative method.

Keywords: Higher Education Institutions, Iraq, Performance.

المستخلص

في عصرنا الحالي، تتحدى مؤسسات التعليم العالي (HEIs) في البلدان النامية بالتغير التكنولوجي السريع وزيادة الطلب على القوى العاملة الماهرة والمؤهلة. وكما نعلم ان المؤسسات التعليم العالي تتكون من الجامعات والكليات والمعاهد ومراكز البحوث من أجل الوصول إلى التقدم في الحياة اليومية والاكاديمية، يجب أن يتفاعل و يعمل هذه المؤسسات معاً للوصول الى النتائج المرضية.

وبالتالي ، تعد مؤسسات التعليم العالي أداة أساسية لتحويل المجتمعات عن طريق تثقيف القادة وصناع القرار ورجال الأعمال والأوساط الأكاديمية. وأن التنمية الاقتصادية المستدامة والصحية لم تعد تعتمد فقط على الموارد الطبيعية ، ولكن أيضا على الموارد البشرية ومعارفها ومهاراتها.

لذلك ، هناك مخاوف جدية حول انخفاض مستويات التعليم في العراق. ليس هناك شك في أن التعليم العالي والبحث العلمي متخلفان عن التعليم العالي في العالم ، وهذا يرجع إلى عدة قضايا مثل: نظام التعليم المركزي الذي هو من بقايا النظام السابق وطريقة التدريس القديمة والمناهج المتضاربة وسوء كفاءة إدارة وزارة التعليم العالي والبحث العلمي (MHESR). أصبحت كل هذه القضايا تؤثر على المنتج المعرفي وتضعف مشاركة التعليم العالي في بناء المجتمع.

الأهداف الرئيسية لهذه الدراسة هي دراسة نمط نظام التعليم (ES) في العراق وخصائصه. ثم يستعرض أداء التعليم العالي والبحث العلمي (HESR) في العراق وإقليم كردستان في العقود الثلاثة الأخيرة. تحدد هذه الدراسة أيضاً التحديات الحالية التي تواجه التعليم العالي في العراق ومؤسساته. في نهاية المطاف ، وبناء على هذه المناقشات ، يتم تقديم التوصيات الرئيسية لإختتامها. نظراً لقلّة البيانات ، اعتمد هذا البحث على طريقة نوعية.

1. Introduction

The Higher Education Institutions (HEIs) in developing countries are challenged by rapid technological change and increased demand on skilled and qualified workforce. HEIs involve universities, colleges, institutes, research centers. These activities should be worked out together in order to access to the progress in the daily life and for an institute to be successful.

Thus, HEIs is an essential tool at transforming societies by educating leaders, decision makers, entrepreneurs and academic stuffs. It is widely accepted that a sustainable and healthy economic development is no longer depending on the natural resources, but also on the human resources, their knowledge and skills.

According to (USIP, 2007), Shlash, et al. (2008) has discussed that over last four decades, Iraq is considered as one of the countries that have achieved a bright success in private sector and educated population; yet it has come to have one of the lowest human development indicators in the region. Presently, it has been clearly noticed that the education system in Iraq is really poor and its far behind from world's standard education..

During 1970-1980, Iraq had the second largest economy in the Arab world after Saudi Arabia and the third largest economy in the Middle East with a good education system, centrally planned and dominated by the state. However, during 1980 - 2003, Iraq experienced number of long wars and severe international economic sanctions; it has effectively ended the positive achievements and severely damaged its education system.

Since then, the economy has suffered from over 30 years of degradation and neglect of its education systems, damaged infrastructure and poor social services. There is an urgent need for a country like Iraq to qualify and enable its people to absorb and follow the rapid developments of modern techniques of production.

Therefore, there are serious concerns about the decline in educational levels in Iraq. There is no doubt that Higher education and scientific research are lag behind the higher education of the world, this is because of several issues such as; centralized education system which is a remnant of the previous regime, old teaching method, inconsistent curricula, poor efficiency of management of MOHESR. All these issues influence the knowledge product and weakens the university's participation in the building of society.

The main objective of this study is to examine the pattern of Education System (ES) in Iraq and its characteristics. Then, it critically reviews the performance of Higher Education and Scientific Research (HESR) in Iraq and Kurdistan region in last few decades. This study also identifies the current challenges confronting Iraq's Higher Education and its institution.

Eventually, in light of these discussions, key recommendations are made to conclude. Due to data limitation, this research has adopted a qualitative method.

2. HEIs in Iraq and its characteristics

Galang (2010) explained that Higher Education (HE) is the vital to improve the life's quality for everyone and for societies. It can be the maximum level of the educational ranking. Lozano (2006) has also stated that Higher Education Institutions (HEIs) play an important role in modernizing humanities by enlightening decision-makers, entrepreneurs, leaders and scholars. HEIs include institutes, colleges, universities, research centers (Yuan and Zuo, 2013).

Higher Education systems involve educational systems which can be described as research organizations, curricula, courses and campus operations and community (Cortese, 2003). A number of the researches have discussed that these activities should be worked together in order for HEs and an institute to be successful (Amin, 2006 and Al-Husseini S., 2014).

There are different opinions concerning the characteristics of private and public HE. According to Balan (1990) report, private HEIs sometimes have responded more rapidly to market demands than public ones. It is claimed that the private sector can respond better to the requirements of society and offers well-paid jobs (Patrinos, 1990). It has been widely argued that public HEIs employment much more senior and superior qualified labor force than private one. Also, they are more efficient in satisfying the public request for a decent quality of education (Wilkinson and Yussof, 2005). However, Mintzberg during its study found out that public HEIs are organizational institutions and have complex systems (1993). Correspondingly, Alhyseini, S. (2014) showed that public institutions are less inspired by financial considerations.

3. Education system in Iraq

Iraq is located in the Middle East between Iran and Saudi Arabia and is also bordered by Syria to the west, Turkey to the north and Kuwait to the south. It has a land area about 437,072 square kilometers, with an estimated population in 2015 of around 36 million. Iraq's per capita income was estimated at US\$6,900 in 2012 (Hussein, J. and Benhin, J. 2015).

Iraq's educational system was established in 1921. The most important achievement in higher education at that time was foundation of some schools such as; Medicine, Engineering, Law and Arts which belonged to the University of Baghdad after its establishment later (WES, 2004). In 1970, Iraq has witnessed a significant progress in different areas of life, such as economic, social and educational sector. The constitution of Iraq has formed a free education system in different levels; elementary, secondary and university. The country has compulsory primary education, and commitment to the eradication of illiteracy. Iraq also

tried to make very productive activities and efforts to raise the level of its educational to the level of educational innovation in the world (Hussein, J. and Benhin, J. 2014).

In order to understand the issue of HEIs in any country, it is quite important to review the nature of the education system in Iraq. It is well known that every aspect in education system and its institutions in Iraq are linked and directed by the state.

There are three authorities control the process of Iraq education system: The first authority is local government educational authorities, which are responsible on nursery and primary education. The second authority is Ministry of Education, which responsible on secondary and vocational education including teacher training, and syllabus development. Third authority is the Ministry of Higher Education and Scientific Research (MOHSR), which is responsible on the administration of universities and the Foundation of Technical Institutes (WES, 2004).

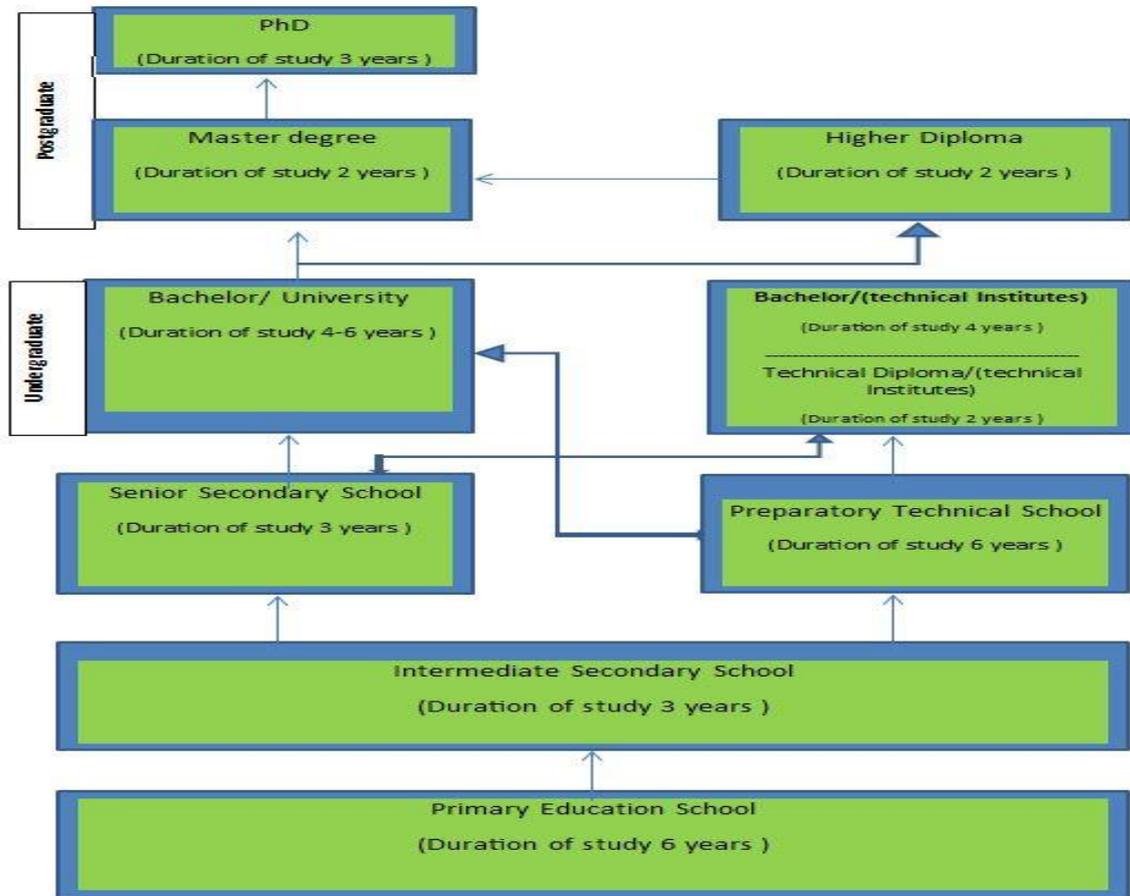
3.1. Primary and secondary school

Iraq like other developing countries, education is compulsory and free of charge. It is highly centralized and state-controlled in which the state fully finances all aspects of public education such as supplying books, teaching aids and free student residences. The main language of instruction at all institutions is Arabic, while Kurdish is taught in Kurdish region.

The education system in Iraq is shown in the below figure (1). It starts with six years of primary school for children who aged 6-years old. Then, after completion of primary education, children who aged 12 to 15-year-old attend nominal 3-year intermediate education. After the intermediate phase, students will be continued on to further general secondary education (vocational education) in a range of sectors. Then, the best students can continue on to general secondary education which takes 3 years. General secondary education is also divided into two majors such as Scientific and Literary.

Furthermore, the secondary students (at grade nine) whose results are less than average, they eligible to apply for joining 3 years secondary vocational programs in technology commerce, or agriculture at a Preparatory Technical School (PTS). Once, they have passed a central examination that established by the Ministry of Education, graduates of these programs are awarded the Vocational Baccalaureate certificate.

Figure 1: Education system in Iraq



Source: Education system Iraq, (2015) 2nd edition, version 3.

The main aim of these programs is to prepare students to enter labor market, and the syllabus is consist of 40-45% theoretical and 55-60% practical themes. Only the best 10% of students are allowed to study HE studies. However, the students who are succeed in general secondary education with marks clearly exceeding 50%, will be admitted to Technical or/and university program (Higher Education in Iraq, in The Swedish National Agency for Higher Education Sector, 2012, R6. P. 14).

3.2. Technical institutes and Universities

In Iraq, there are two types of higher education institutions; technical institutes and universities. The technical institutes provide higher professional education in both options; 2-year programs that lead to a Technical Diploma and 4-year programs leading to a bachelor's degree.

The students are admitted to universities through a central system, the students who entered the university and passed obligated course will be awarded a Bachelor degree. Most university programs study for 4 years, (except dentistry, pharmacology and veterinary medicine, which take 5 years, while medicine takes 6 years). After the students being

qualified that allows graduates to enter the labor market or to continue on to further study. Moreover, the universities have bachelor, master and PhD. Programs, leading respectively to bachelor, master and PhD degrees (Jinan, I. And Hazri J, 2010).

There are also two types of universities in Iraq, which are private and public universities. Private universities have existed since the 1980s; which most of these universities have been directed by the Ministry of Higher Education and Scientific Research (MHESR). The curricula of these programs are highly centralized.

In terms of level, the Higher Diploma is comparable to one year of Master's degree in a similar specialized. Once the students completed a master's degree, they might apply to join the Ph.D degree. Ph.D. Study is highly selective and the study demands 3 to 4 years study. This program consists of 1 year of coursework and 2 years of research and the writing of a doctoral thesis. The doctoral thesis must be based on significant contribution which can be considered as a novel research.

4. The current state of Higher Education and Scientific Research in Iraq and Kurdistan region

Lozano, F. and Lozano, J. (2013) have stated that universities play a great role in transforming societies, by educating leaders, decision-makers, entrepreneurs, and academics and serving the greater public good. Nonetheless, in many ways, they continue to be very traditional by contributing to and even accelerating unsustainable ways of development. I. Harb, (2008) has also explained that universities can adopt a new discipline that will learn students in conflict resolution, reconciliation, institution building, civil society development, democracy, and human rights.

As it mentioned before, in the section 2, there are two types of higher education institutions; universities and technical institutes. The first modern university in Iraq was established (University of Baghdad) in 1957. Since then, some other universities were established in the country, such as the University of Technology and Al-Mustansirya in Baghdad, universities in Basra, Mosul and Sulaymaniah. Moreover, in the 1960s, due to the oil boom the government has adopted five-year plan for 1965-1968 aimed to invest in human capital (Shlash, et al., 2008).

In 1968, when the Ba'ath party started officially to rule in Iraq, the quality of higher education has been gradually deteriorating. This has been exacerbated when the country confronted a long war in 1980 and followed by a sequence of wars, sanctions and political instability. As a result of this situations most of higher education system and its institutions were severely damaged (Zahra R. , 2009).

However, post 2003, following the successive wars and economic sanctions, several structural reforms have been carried out by the Iraqi government toward different economic

sectors, including educational sector in order to enhance the quality of HE (Hussein J. and Benhine J. 2015). Due to growing demand for higher education at that time 14 more new universities were established.

These reforms were not fulfilled, soon Iraq has involved in another war against Da'esh. HEIs continued to be confronted with number of educational constraints. Among these problems are; budget crisis has forced funding cuts to universities for everything except salaries to faculty and staff. Funding for research, equipment and supplies, travel, special projects, and construction has been significantly reduced. During 2015–2017, many university campuses suffered from a lack of equipment and basic resources like electricity etc.

4.1. Universities

Currently, Iraq's Higher Education System and Scientific Research (MoHESR) (south and middle) consists of 36 public and 65 private universities, (see table 1 and 2), offering studies in different fields such as medicine and engineering computer science, business administration, economics and management etc. The teaching language in higher education is English and Arabic , except for the faculty of medicine and the engineering faculties where the language of tutoring is English. The study system of these universities are directed and organized under the supervision of the Ministry of Higher Education and Scientific Research (MHESR).

According to the statistics of Ministry of Planning and Development Cooperation in Baghdad (2007 and 2011b), the number of students that enrolled in public education was (325,994) for academic year 2006/2007 and increased to (400,866) for academic year 2010/2011, a percentage increase of (23.96%) (CBS, 2011b and CBS, 2007).

There are also 21 teaching hospitals, 48 research centers, and 163 scientific consulting offices. Of the 40,000 faculty members, 42 percent have PhDs and 63 percent are male (Al-Sandook, Middlebrough, and Suleyman, 2016).

Table 1: List of Public universities in Iraq		
Name of University	Location	Links
Al Karkh University Of Science	Baghdad	http://www.en.kus.edu.iq/
Al Karkh University Of Science	Baghdad	http://www.kus.edu.iq/
Al Kindy College of Medicine	Baghdad	http://www.kmc.edu.iq/
Al Muthana University	Samawa	http://www.uoalmuthana.edu.iq/
Al Nahrain University	Baghdad	http://www.alnahrain-university.com/
Al Qadisiyah University	Diwaniyah	http://qadissuni.edu.iq/
Al Qasim Green University	Babylon	http://www.uoqasim.edu.iq/
Babylon University	Hillah	http://www.uobabylon.edu.iq/
Basrah University College of Medicine	Basrah	http://www.basmedcol.com/
Basrah University for the oil and Gas	Basrah	http://buog.edu.iq/ar/
College of Science Baghdad University	Baghdad	http://www.scbaghdad.edu.iq/

Diyala University	Baqubah	http://www.uodiyala.edu.iq/
Furat University East Technical	Al Najaf	http://atu.edu.iq/
Ibnsina University of medical and pharmaceutical sciences	Baghdad	http://www.ibnsina.edu.iq/
Jabir ibn Hayyan Medical University	Kufa	http://jmu.edu.iq/
Middle Technical University	Baghdad	http://www.mtu.edu.iq/
Ninevah University	Ninevah	http://www.uoninevah.edu.iq/
Northern Technical University	Ninevah	http://www.ntuiq.com/
Southern Technical University	Basrah	http://stu.edu.iq/
University Of Al-Hamdaniya	Ninevah	http://www.uohamdaniya.edu.iq/
University of Anbar	Ramadi	http://www.uoanbar.edu.iq/
University of Fallujah	Fallujah	http://www.uofallujah.edu.iq/
University of Information Technology and Communications, Iraq	Baghdad	http://www.uoitc.edu.iq/
University of Karbala	Kerbala	http://www.uokerbala.edu.iq/
University of Kirkuk	Kirkuk	http://uokirkuk.edu.iq/ar/
University of Kufa	Kufa	http://www.uokufa.edu.iq/
University of Misan	Amarah	http://www.uomisan.edu.iq/ar/
University of Misan	Amarah	http://www.uomisan.edu.iq/ar/
University of Mosul	Mosul	http://www.uomosul.edu.iq/
University of Samarra	Samarra	http://www.uosamarra.edu.iq/
University of Sumer	Thi-Qar	http://www.uos.edu.iq/
University of Technology	Baghdad	http://www.uotechnology.edu.iq/english/
University of Telafer	Telafer	http://www.uotelafer.edu.iq/
University of Thi-Qar	Nasiriya	http://utq.edu.iq/
University of Tikrit	Tikrit	http://www.tu.edu.iq/
University of Wasit	Al Kut	http://www.uowasit.edu.iq

Sources: CBS 2007; CBS 2011a; CBS 2011b; MOHESR 2016.

Table 2: List of Private universities in Iraq		
Name of University	Location	LINKS
Ahlulbait University College	Karbala	http://abu.edu.iq/
Al - Alamain Institute for Postgraduate Studies	Al Najaf	https://www.albani.college.edu.iq
Al Farabi University College	Baghdad	https://www.alfarabi.college.edu.iq
Al Hadbaa University College	Al Musel	http://www.alhadba-university.org/
Al Kitab University College	Kirkuk	https://www.al-kitabcollege/
Al Maamoon University College	Baghdad	http://www.almamonuc.org/
Al Maarif University College	Al-Anbar	http://www.auc-edu.org/
Al Mansour University College	Baghdad	http://www.almansourcollege.net/
Al Rafidain University College	Baghdad	http://raf.coalrafidain.edu.iq/
Al Rasheed University College	Baghdad	http://alrasheedcol.edu.iq/
Al Turath University College	Baghdad	http://www.turath.edu.iq/

Al Yarmouk University College	Diala	http://www.al-yarmok.com/
Al-Bani University College	Baghdad	https://www.albani.college.edu.iq
Al-farahidi University College	Baghdad	https://www.alfarahidi.college.edu.iq
Al-Hikma University	Baghdad	http://www.alhikma-iq.com/
Alkafeel University College	Al Najaf	http://uch.edu.iq/
Al-Kunooze university college	Basrah	https://www.alkunooze.college.edu.iq
Al-Mustafa University College	Baghdad	https://www.almustafauniversity.edu.iq/
AL-Nisour University College	Baghdad	https://www.alnisour.college.edu.iq
Al-Qalam University College	Kirkuk	http://www.alqalam.edu.iq/
Alsalam University College – Baghdad	Baghdad	http://alsalamuniversity.com/
Altuff University College	Karbala	https://www.altuffi.college.edu.iq
Baghdad College of Economic Sciences University	Baghdad	http://baghdadcollege.edu.iq/index/
Baghdad College of Pharmacy	Baghdad	http://www.bpc.edu.iq/
Basrah University College of Science and Technology	Basrah	http://basrah-college.com/
Basrah University College of Science and Technology	Basrah	https://www.albani.college.edu.iq
Business & Management University	Baghdad	http://www.en.uobaghdad.edu.iq/
College Al Safwa University	Karbala	https://www.alsafwa.edu.iq/
College Future University	Hilla	http://www.mustaqbal-college.edu.iq/
College hopes	Baghdad	https://www.albani.college.edu.iq
College Noor University	Mosul	https://www.noor.college.edu.iq
College of Mesopotamia	Baqubah	https://www.mesopotamia.college.edu.iq
Dean University	Karbala	https://www.albani.college.edu.iq
Dijlah University College	Baghdad	http://www.duc.edu.iq/
Elite University College	Baghdad	https://www.elite.college.edu.iq
Hillah University	Hillah	http://www.hillauni.edu.iq/
Humanitarian Studies University College	Najaf	http://www.Humanitarianstudiesuniversitycollege/
Ibn-Hayan University College	Karbala	https://www.ibnhayani.college.edu.iq
Imam University College	Salahaddin	https://www.imamuc.com/
Iraq University College	Basrah	http://www.iraqiuniversity.net/
Iraq University College	Basrah	http://www.iraqiuniversity.net/
Islamic University College	Najaf	http://www.iunajaf.edu.iq/
King Hussein Engineering College	Karbala	http://www.Alhussain.Engineering.edu.iq/
Konooz University College	Basrah	https://konoozuniversitycollege
Madenat Alelem University College	Baghdad	http://mauc.edu.iq/
Madenat Alelem University College	Baghdad	http://mauc.edu.iq/
Mustafa Amin Private University	Baghdad	https://www.albani.college.edu.iq
Pacific University College	Baghdad	https://www.albani.college.edu.iq
Shat Al Arab College	Basrah	http://sa-uc.edu.iq/
Sheikh Tusi University College	Al Najaf	http://altoosi.edu.iq/ar/
Sheikh Tusi University College	Najaf	http://sheikhtusiuniversitycollege /

The Osol Aldeen Private University College	Baghdad	https://www.osolaladeen.iq/
University College Iraq released	Baghdad	http://www.saderaliraqcollege.com/si/
University of advantages	Thi-Qar	https://www.mazaya.college1/
University of Imam Sadiq (AS)	Baghdad	http://www.sadiq.edu.iq/
University of Imam Sadiq (AS)	Amarah	http://www.sadiq.edu.iq/
University of Imam Sadiq (AS)	Al Najaf	http://www.sadiq.edu.iq/
University of Imam Sadiq (AS)	Muthanna	http://www.sadiq.edu.iq/
University of Imam Sadiq (AS)	Thi-Qar	http://www.sadiq.edu.iq/
University of Imam Sadiq (AS)	Diala	http://www.sadiq.edu.iq/
University of Imam Sadiq (AS)	Salahaddin	http://www.sadiq.edu.iq/
University of Imam Sadiq (AS)	Kirkuk	http://www.sadiq.edu.iq/
University School of Fiqh	Al Najaf	https://www.fiqh.college.edu.iq
Univesity of Esraa	Baghdad	https://www.esraa.edu.iq
Uruk University	Baghdad	https://www.albani.college.edu.iq
Walcott University College	Kut	https://www.alkutcollege.edu.iq

Sources: CBS 2007; CBS 2011a; CBS 2011b; MOHESR 2016.

It should be mentioned that Kurdistan's Ministry of Higher Education and Scientific Research (MoHESR) is mainly independent from Iraq's (MoHESR), although they are coordinating in making some decisions. It was first officially established in Erbil in 2006. It has an authority over all of the universities, technical institutions, students, and faculty in the Iraq Kurdistan Region (IKR). The number of higher educational institutions in the Kurdistan region has expanded since 2006 (Sameeksha D., 2010).

Presently, the Kurdistan region has 15 public and 12 private universities which are officially and legally registered, including three American - Style, not-for-profit universities, where the instruction is in English (see tables 3 and 4). The American University of Iraq-Sulaimani (AUIS) was established in 2007 and now enrolls more than 1,400 students. Primarily a liberal arts undergraduate institution, AUIS also provides a small number of graduate programs and an intensive English language program. The American University of Kurdistan (AUK) in Duhok opened in 2015 with an intensive English language program and several undergraduate programs. The Catholic University of Erbil (CUE) was also recently established.

Table 3: List of Public Universities in Kurdistan Region

Name of University	Location	LINKS
Charmo University	Chamchamal/Sulaymaniyah	http://charmouniversity.org/
Duhok Polytechnic University	Duhok	http://dpu.edu.krd
Erbil Polytechnic University	Erbil	http://epu.edu.krd/en
Hawler Medical University	Erbil	http://hmu.edu.iq
Koya University	Koya/Erbil	http://koya.university
Salahaddin University /Erbil	Erbil	http://su.edu.iq

Soran University	Soran/Erbil	http://www.soran.edu.iq
Sulaimaniyah Polytechnic University	Sulaymaniyah	http://www.spu.edu.iq
University of Duhok	Duhok	http://www.uod.ac
University of Garmian	Kalar/Sulaymaniyah	http://www.garmianuniv.net
Halabja University	Halbja/Sulaymaniyah	http://www.halabjauni.org
University of Raparin	Raparin/Sulaymaniyah	http://www.raparinuni.org
University of Sulaimaniyah	Sulaymaniyah	http://univsul.edu.iq
University of Zakho	Zakho/Duhok	http://www.uoz-krq.org
Polytechnic University of Sulaimaniyah	Sulaymaniyah	http://spu.edu.krd

Sources: CBS 2007; CBS 2011a; CBS 2011b; MOHESR 2016.

Table 4: List of private Universities in Kurdistan Region

Name of University	Location	LINKS
The American University of Iraq /Sulaimaniyah	Sulaimaniyah	http://auis.edu.krd/
The American University of Kurdistan/ Duhok	Duhok	http://auk.edu.krd/
Al Bayan University	Erbil	http://albayan.edu.iq
British Royal University for Science and Technology	Erbil	http://www.broyalu.com/
The Catholic University of Erbil	Erbil	http://cue.edu.krd/
Komar University of Science and Technology	Sulaimaniyah	https://komar.edu.iq
Nawroz University	Dohuk	https://nawrozuniversity.edu.iq
Cihan University - Erbil , Arbil Governorate	Erbil	http://cihanuniversity.edu.iq
Ishik University - Erbil , Arbil Governorate	Erbil	http://www.ishikuniversity.net/
University of Human Development	Sulaimaniyah	http://humandevlopmentuniversity.edu.iq
University of Kurdistan	Erbil	http://Kurdistanuniversity.edu.iq
International University of Erbil	Erbil	http://internationaluniversityofErbil.edu.iq

Sources: CBS 2007; CBS 2011a; CBS 2011b; MOHESR 2016.

4.2 Technical Education

Preparation students for achieving diploma is one of the Technical Education's target aiming to make connections between skilled and qualified workers in the different areas of health, medicine, administration, engineering, agriculture, and applied arts. It helps to support investment in scientific research at training and educating skillful and knowledgeable technicians. It also provides high-quality services (FTE, 2011).

The further development of higher education in Iraq was characterized by establishment of technical institutes. Technical institutes had significant growth after their establishment in 1969. This expansion was triggered by the flourishing oil boom which reflected a high demand for large numbers of qualified technicians. Iraq has 37 Technical Institutes and 9 Technical Colleges with 66 000 students, with 2837 teaching staff. So, this means, there is at least one Institute in each of the 18 governors (UNESCO, Paris, 22-23 February 2005, UNESCO, 2004, Al-Sandook; etl. 2016). Table 6 shows the technical colleges and institutions registered in Iraq's MoHESR's database, including years of establishment and locations.

Table 5: Technical colleges and in Iraq

College/ institute	Number of departments	Year established	Governorates
Technical college/Baghdad	8	1993	Baghdad
Technical college of Mosul	5	1993	Mosul
Technical college – Basrah	5	1994	Basrah
Health and Medical Technical college	7	1995	Baghdad
Technical college/ Musab	7	1998	Babylon
Technical college/Najaf	4	1998	Najaf
Technical college/Kirkuk	6	1999	Kirkuk
Electrical and Electronic Technical college	3	1999	Baghdad
Technical college for administration/ Baghdad	4	2000	Baghdad
Technical college for administration/Kufa	2	2007	Najaf
Technical college for administration/ Mosul	2	2007	Mosul
Applied Arts college	2	2007	Baghdad
Technical college for administration /Basrah	2	2007	Basrah
Institute of technology/ Baghdad	8	1969	Baghdad
Technical institute for administration/Ressafa	7	1969	Baghdad
Applied Arts institute	5	1969	Baghdad
Technical institute/Basrah	19	1973	Basrah
Technical institute/ Babylon	9	1976	Babylon
Technical institute/Mosul	21	1976	Mosul
Technical institute/Kirkuk	23	1976	Kirkuk
Technical institute for administration	5	1976	Baghdad
Technical institute/Anbar	10	1976	Anbar
Technical institute/Najaf	11	1978	Najaf
Technical institute/Aumara	10	1979	Mysan
Technical institute/Musayab	10	1979	Babylon
Technical institute/Shatra	10	1979	Thi-qar
Technical institute/Nasiria	9	1980	Thi-qar
Technical institute/Kut	9	1980	Wasit
Technical institute/Hawija	6	1980	Kirkuk
Technical institute/Kufa	10	1981	Najaf
Technical instructors training institute	4	1987	Baghdad
Technical institute/Alsuwayra	4	1987	Wasit

Technical institute/Door	5	1988	Tikrit
Technical institute/Baquba	9	1988	Dyla
Technical institute/Karbala	6	1988	Karbala
Technical institute/Semawa	6	1988	Muthanna
Institute of Medical technology/ Mansour	6	1988	Baghdad
Technical institute/Dewanya	5	1988	Qadisaya
Technical institute/Nainaw	5	1993	Mosul

Sources: CBS 2007; CBS 2011a; CBS 2011b; MOHESR 2016.

5. Current Challenges Confronting Iraq's Higher Education Institutions

Given this conflict situations, social and political instability, the economy has suffered for more than three decades of neglect and degradation of its infrastructure and social services, especially in the field of education systems and its institutions. The quality of HEIs has declined and isolated from the world's educational standards. Therefore, there are serious concerns about the decline in education levels in Iraq. Therefore, this study has identified number of challenges which are facing the HEIs and can be listed as follows:

1. **Lack of modern teaching method:** there is no enough initiative to improve teaching method in Iraq. This can be noticed in all levels of the higher education hierarchy. The teaching methods and course designs are outdated. Spoon-feeding is the dominant teaching methodology that students need to highly depend on memorization. Actually, this one of the most serious pre-college problems where spoon-feeding is also dominant in primary and secondary schools.
2. **Inconsistent curricula:** A consistent curriculum is as an essential part of the learning process. Because Iraq's education was closed to the world, there is no accurate coursework task, especially at the managerial and institutional levels. There is a shortage of laboratories, and poor libraries which are an essential part of the learning process. These obviously show a deficiency in providing the required support for teacher's success.
3. **Shortage of training centers:** There is an obvious deficiency in training programs. This can be seen in some scientific faculty such as physics and ICT colleges which need continuous training on latest equipment and techniques to conduct their experimental work. This shortage has highly reflected on the skills of academic members in universities, they are even unable to improve their English language.

4. **Poor performance:** poor performance and low levels of management is highly noticed in MOHESR in Iraq. There is no balance between authority and responsibility. Higher level administrators are trying to decrease the authorities of lower levels; at the same time they are trying to push more responsibilities on those. Yet worst, some significant jobs are assigned to people based on connections to authority or administrators.
5. **Centralization issues:** The educational system is still linked to the central government through (MOHESR) which is a remnant of the previous regime. So, making decisions in the many universities are influenced by the political and religious thoughts. Furthermore, the selections of people in significant administrative positions are based on their benefits and interests.
6. **Publication challenges:** there is no financial support to enhance the faculty members to publish their research papers in high rank journal or present it at international conferences especially in the scientific field. Therefore, producing high quality of paper is severely limited by the shortage of scientific equipment and materials.
7. **Lack of diversity:** Most Iraqi universities now do not consider the actual needs or diverse specialized universities. Rather, they tend to have very similar colleges and scientific departments.

6. Conclusion and Recommendations

Based on the aforementioned discussions and challenges following recommendation are made;

1. Education is considered one of the most important components of Iraqi infrastructure that needs to be rebuilt. **The government should allocate some more budgets to reconstruction of the campus of HEIs, scientific research and trying to invest in the theoretical and applied research.**
2. In order to build learning universities, we have to consider creating the capability of Lecturers and teachers in the universities and schools should be well-trained to deliver high quality courses and focused on the modern theories and techniques in education. In addition to teaching, the lecturers should present high quality of research. Thus, they have to make a balance between teaching and research requirements. In fact, it has been confirmed that providing high quality of teaching is an introduction leading to high quality research.
3. Universities need to be independent in terms of admission policies and preparation of the curriculum, which must be scientific, away from any political, sectarian or nationalist ideology. Iraq's higher education should be opened to the world, and ready to make any changes to keep their education system and curriculum healthy and updated.
4. Political stability is a key objective that needs to be achieved in order to enhance educational system in the case of Iraq. Therefore, social and political stability should be put in place to enhance the level and quality of education system in Iraq.
5. The government should work to remove or at least minimize the corruption at all levels in the country. People with high quality leadership skills (holding master or PhD degree) to be in the most significant positions. By doing that educational level would be a lot more satisfied.
6. Iraq's universities need continually to engage more with foreign conferences, collaborating with advanced universities across the world and offering the students paid scholarships.
7. Iraqi with highly centralized higher education needs to modify to one have more flexibility and decentralization. The universities in Iraq should be kept away from centralization in which all universities are linked to the state.
8. Government should focus on designing more specialized universities that take into account the actual needs and diversity of the close outer environment.

9. Improving the Higher Education in Iraq through Student Collaborations that help produce a new generation that believes in serving the community and participates in leading the country. Student collaborations may enhance students' leadership skills, teamwork, and communications.
10. Technical institutions help to support investment in scientific research at training and educating skillful and knowledgeable technicians. It also provides high-quality services.

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