

IRAQI HIGHER EDUCATION DIGITIZING TRAIL DURING COVID19 PANDEMIC

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Abstract—*The study explains in depth how the Iraqi Ministry of Higher Education rescues and successfully completes the academic year 2019-2020 in very difficult and complicated circumstances. 101 Iraqi higher education institutions, with nearly 50,000 academics and more than 811,000 students. All started running, teaching, and learning unexpectedly. In less than a week, the ministry and its executives and special ministerial ICT workers will never stop returning life to the ministry of higher education institutions and raising the address of our universities, and we will return our universities and learning institutions to operate from our homes and have never stopped learning. Universities may not have true and strong infrastructure in Iraq, but we work and fully invest in what we have. After meeting the criteria for academic year expectations and reviewing what has been accomplished, a decision was made to complete it via e-exams of student accomplishments. The condition of the health society led the ministry to this decision because it was difficult to return the universities to its ordinary works to do the exams. Unique e-exams have been conceived and will begin to be carried out with postgraduate students from 14 June 2020, following the training of all 101 institutional review committees on e-exams and their procedures and mechanisms. The results obtained show us very clearly that the Ministry of Higher Education is saving the 2019-2020 academic year with a high degree of standards. For the next year 2020-2021, the ministry agreed to benefit from what has been accomplished and prepared a roadmap to improve learning productivity to implement blended learning with micro face-to-face learning. With the introduction of e-learning and lifelong learning, Iraqi society has taken a very large move towards information society.*

Keywords—*Blended learning; Iraqi higher education (IHE); Ministry of higher education and scientific researches (MOHESR), e-exams, Internet; Covid19 pandemic*

I. INTRODUCTION

In Iraq, our education system before Covid-19 was focused on the traditional teaching and learning methods like face to face old method. The digital facts about Iraq show us that the society are ready to transform towards new electronic learning methods. If we keep our traditional methods, we rob the future of our students. More than 75% of the population using the Internet daily, with 100% mobile holders and using. As shown in figure no.1.

Everything in the educational systems, in all of the worlds is changing quickly after covid-19. Education systems nowadays are different from the same last three months ago, and they follow the ICT revolution and gain the required benefits from its new productions. Schools and Classrooms are changing urgently nowadays in order to meet the new educational technologies using requirements, and away from rows of desks, to an environment that advertises cooperation between learners, teachers and learning tools. Learning environments are now preparing learners for their destined work condition and environments in the future after graduation from schools. These new classrooms called Optimized Digital Classroom. [1].



Figure no. 1: Internet in Iraq facts using

II. IRAQI HIGHER EDUCATION SYSTEM

Iraq’s current higher education system have now two Higher Education Ministries, , one is in the Main, and it is in the Federal governmental of Iraq, and it is located in Baghdad (www.moheer.gov.iq), and it become a federal ministry after fixing the Iraq Federal system and the constitution in Oct 2005. ((in this research the researcher focus only about the Federal Iraqi Area which is all eras of the Iraq without Kurdistan Region because they are another case)).

Iraqi’s current higher education system (all Iraq Arabic governorates in the Federal Government without the three Kurds governorates) comprises of 35 universities (philosophy of the government is same from 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) with two Commissions for: 1- Medical Specialization and 2- Computer and Information. and the Ministry of Higher Education and Scientific Research (MOHESR) (www.moheer.gov.iq) is located in Baghdad. Also there is a 16 private university and 45 private university colleges, as shown in figure no.2.

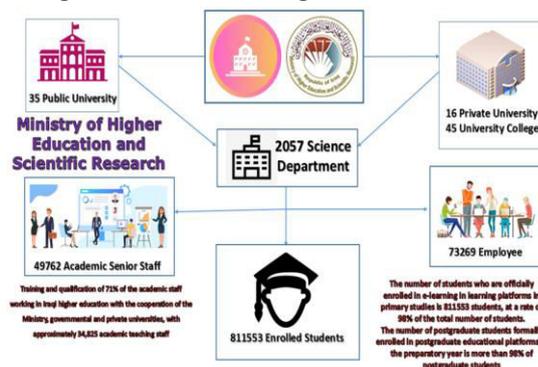


Figure no.2 : Iraqi higher education stats

III. IRAQI HIGHER EDUCATION ACADEMIC YEAR 2019-2020

In general, the circumstances that Iraq has passed through have been very difficult and complicated. All indications have alluded to the difficulty of completing the academic year in accordance with international standards criteria in a way that achieves and safeguards the process of teaching and learning from the beginning of the yearly academic calendar in Iraq on the level of higher education.

The academic year starts in September every year and continues in October towards achieving the educational aims designed for it. The academic process has started with the demonstration that the youth have started in more than 12 Iraqi provinces and have continued for more than 8 weeks, a thing that has resulted in the fact that the academic study and educational process have stopped in many universities in Baghdad and southward, However; the educational process has been stable in the provinces which have not witnessed demonstrations and where universities in the west of Iraq and north of Baghdad have been opened. From the beginning:

- It is worth mentioning that the MOHESR, right from the beginning in June 2019, and before the start of the academic year in Sept. 2019 has adopted the concepts of electronic and blended learning. It has also started preparing qualified teaching staff, the members of which have been ready to start the experience and to spread digital learning cultures within the frame of a promising project for the purpose of adopting electronic learning in Iraqi universities and distance learning and life long learning.
- The ministry has been well qualified to apply these concepts as from the beginning of the academic year. The rate of achieving the adopted project of electronic learning which has been planned precisely and carefully and within intricate and precise timing comprises five executive stages which amount to more than 15%.

The stages of the project execution are the following:

- 1- *The stage of collecting and analyzing information.*
 - 2- *The stage of building up and preparing platforms and educational programs.*
 - 3- *The stage of building up human capabilities.*
 - 4- *The stage of starting synchronous and asynchronous tests.*
 - 5- *The stage of evaluation*
- MOHESR, in Nov. 2019, reach 15% & before Feb. 2020, there was a real hard work and push forward the blended e-learning.
 - The MOHESR has succeeded before Corona Pandemic in Iraq to attain a rate amounting to 30% of the project adoption aims.

IV. IRAQI HIGHER EDUCATION DURING PANDEMIC

Since starting measures to confront Corona Pandemic, the MOHESR succeeded in shortening time to achieve most stages of the project goals, through its specialized technical team in immediately directing and following up all Iraqi educational institutions all over Iraq from Mosul at north of Iraq to Basrah south of Iraq, by direct and daily supervision by those responsible at the MOHESR and with the help of establishing responsible bodies whose work is to directly and daily supervise relevant issues.

Within 3 months only, higher education in Iraq reach a rate that bypasses 98% of the project aims. As shown in figure no.3.

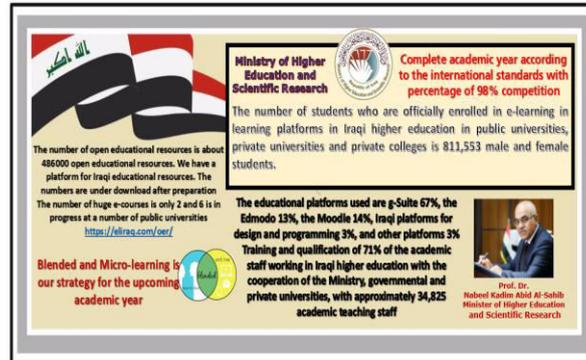


Figure no.3: MOHESR Minister Achievements letter

V. STATS AND FACTS

- 1- Our Iraqi Universities and higher education institutions never stop and we fastly transform our daily academic works to houses in less than one week when covid19 pandemic starts in Iraq.
- 2- 811553 students in Iraqi Higher Education, in undergradaraduate and postgraduate studies are learning online now in Iraqi Higher Education.
- 3- In December 2018 e-learning adoption in Iraqi Higher Education was less than 5%
- 4- 1st of May 2020, we are more than 80%
- 5- In June 2020, we reach our target that almost all Iraqi higher education students are learning remotly.
- 6- UNESCO certify us as one of the Fastest and Best in transform learning and teaching during covid-19.
- 7- About 811553students in undergraduate and postgraduate studies are passed to the online exams in Iraq now.
- 8- 99% of the postgraduate students are learning online in Iraq now
- 9- During covid-19, and at the beginning , the ministry policy was connect and communicate only, then move and starts to create classrooms and use e-learning platforms and do a complete teaching and learning process
- 10- Advicing our academics to continue live teaching ans online teaching through electronic classrooms.
- 11- Asking academics and proffessors to create digital office hours
- 12- Use offline features to support students with limited or no home internet access, with the help of the Ministry of communication and Mobiles ccompanies in Iraq.
- 13- Provide one-on-one guidance remotely
- 14- Due tothe experience, and following the other countries trials, we do not allowed academics to do any kind of achievements exams at the beginning, and allowed to do some short exams and quizzes and assignments,
- 15- Then allowed them to do only small quizzes, tests and exams, to train the academics and students on the e-exams.

16- IHE stand up now on 98% of e-learning Adoption and it was achieved by real HARD WORK.(figure no.4).

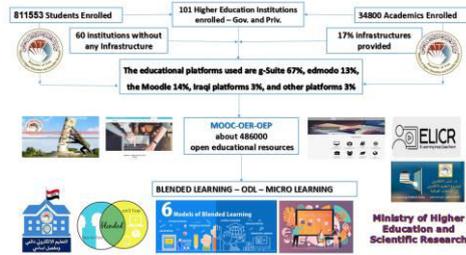


Figure no.4: MOHESR Achievements

17- IHE have decide to use SCROM standards in IHE, and start using it

18- More than 35% of the Academics yearly achievement degree goes to his e-learning using in Iraq now before covid-19, and now we have raise it to be more 65% after covid-19.

19- Human Resources Capacity Building (HRCB): was the main factor that guide us to success, We train more than 34000 academics in more than 3750 workshop and virtual workshops

20- Organize the biggest ever virtual e-learning international conference, with more than 100 keynote speaker, 25200 attendance on more than 20 seesions on 10 days.



Figure no. 5: Iraqi international virtual conferece flags and some keynote speakers

21- Build and complete Iraqi first OER platforms, since we have decide as a ministry to move forward to blended learning, and we have now more than 480000 open resource refrence have been prepared by Iraqi academics. (figure no.6)



Figure no.6: MOHESR OERplatform

<https://eliraq.com/oer/>

22- Build our massive open online courses platforms, and we will open it for Iraqi academics using at the beginning of the new academic year. MOOCRDD which is the first Iraqi lifelong learning and Training MOOC system, designed and executed at the Research and Development Directorate at the Ministry of Higher Education

23- and Scientific Research (Ministry HQ).(Figure.7 & 8)



Figure no.7: MOHESR MOOCRDD platform-1

<https://eliraq.com/mooc/>



Figure no.8: MOHESR MOOCRDD platform-2

24- Focusing on e-learning content industry and start using SCROM standards and build the culture of the e-learning industry. (figure no, 9)



Figure no.9: MOHESR e-content standard specifications

https://www.researchgate.net/publication/338470458_e-Content_Specifications

VI. IRAQI HIGHER EDUCATION AND E-EXAMS

1- Before starting a synchronous electronic exam on the level of postgraduate studies, a complete and integrated evaluation of the full learning and teaching process achievement has been done. A decision has been taken accordingly, to continue the academic year until attaining the final academic

test exams. Since June 2020, higher education has started. Before that, various experimental tests have been executed. It is hoped that the undergraduate studies would start at the end of July 2020.

- The MOHESR concerned has taken a decision to hold final examinations at the end of the academic year after ensuring the efficiency of the electronic learning process which has been affected to work according to the required criteria of the scientific and acknowledged quality.
- Iraq a state and higher education as representing the Ministry have joined the international alliance for education, and an alliance that has been started by UNESCO at the end of March 2020.

VII. SOLUTIONS ACHIEVED FOR THE ADOPTION

More than 3750 meeting, workshops and conferences in Iraqi universities and learning institutions, for increasing the e-learning culture between Iraqi academics. Training and qualification of 71% of the academic staff working in Iraqi higher education with the cooperation of the Ministry, governmental and private universities, with approximately training about 34,825 academic teaching staff

a. IT Solutions Roadmap Adoption

A lot of e-learning solutions have been designed, programmed and executed locally (some of them are personal achievements), like: Baghdad e-learning platform (the first ever Iraqi complete e-learning platform).(figure.10)



Figure no. 10: Baghdad e-learning Platform
<https://www.eliraq.com/platform/>

- Iraqi higher education academic monitoring system, designed and executed at the the Research and Development Directorate at the Ministry of Higher Education and Scientific Research (Ministry HQ).
- Iraqi higher education Atlas and it was the first ever Iraqi institutional Atlas, and it was tested by using it in 4 Iraqi public universities that are located in Baghdad and was designed and executed at the the Research and Development Directorate at the Ministry of Higher Education and Scientific Research (Ministry HQ).
- The first Iraqi e-university model, and it was designed and executed to cover all the universities management, learning and administrative needs. (Figure.11)

((In our roadmap philosophy, we give the chance to the learners to lead the learning operation under the control of their teachers))



Figure no.11: Iraqi e-University platform

b- The IT Solutions Specifications

Our e-learning solutions doesn't require to install specific hardware or software in order to access and use it. It covers new areas that have been never used before in Iraqi higher Education and all are up to date solutions and applications. By logging into a web portal as a teacher or learner, you will have and your learners have access to the features of the platform solutions. Most social applications are cloud-based and the new education world is following suit. Also it is:

1. Cost-Effective

Our applications are more cost-effective than an installed LMS and also don't have to pay for maintenance. [17][19][21].

2. Implementation Time

The designed applications, need only to access the web portal of the platform and follow the easy instructions and we making it a speedier process. [18][19][21].

3. Easy to Use

Web applications are ubiquitous. Whether it's using Google education applications, edmodo, moodle or Facebook or any other application, it falls in line with the more common choice for users thus making adoption easier. There is a familiarity that makes it much easier for your learners to use. [13][14][16][17].

4. Configurable

Our applications are cloud learning management systems generally that allow you to change color schemes, templates, turn features on and off, and even brand and white-label. [10]. All our applications might be as customizable and configurable as required. [16][18][19].

5. Mobile-Friendly

Our applications allow you to use the software from anywhere on any device with a responsive design ensures that the user interface responds to the size of the device. [15][18][20].

6. Secure and Scalable

Designed applications are highly secure in order to give confidence to the teachers and students. [17][20].

7. Low Maintenance

The maintenance of our applications is taken care of by the designer now. [18][19].

8. Streamlines Learning

Our application products have been designed to be easy to use. [3][21].

c. Pedagogical solutions for Adoption

1-Solving problems in universities first and the trend towards digital knowledge society and personalized learning

Most of the countries that have made progress in their educational systems have begun adopting digital means to reach the integrated electronic education environment. [7][9][10]. This does not mean in any way the elimination of the role of teachers or university professors in the education process, or changing the education and learning philosophies.

Covid-19 will end, and we will return to our universities as it was before but with adoption of blended learning. The technologies is to help, support, increase and raise efficiency and within the concept of blended learning (BL). [10]. BL unfortunately is completely absent from our educational institutions in all forms and types and classifications from primary schools to universities in Iraq. They are still looking for methods of mechanization modern, even though it has become a free software and can be used after adapted according to the needs of the school or educational institution and easily.[11][12].

Current Covid19 have seen a stable rotation toward extra personalized learning in education. As educational technologies enhances teachers and verdict further methods to produce individualized learning chances for their students. [3][13][14]. The digital transformation tendencies of blended learning and adaptive learning are two methods to personalize the educational knowledge which we have succeeded in adopting during our trial to adopt e-learning in the IHE academic year.[3][14]. Blended learning that used in IHE personalizes and enabling the learners to target on discovery, provides learners with more dominion and to make their personal conclusions about direction and pace.

Adaptive learning technology examines learner's input and immediately adjusts the learner's learning materials and evaluations. It implements can raise classroom lightness and support learner completion.

2- 1 to 1 Ratio Classrooms

An important digital change tendency we expect to the diocese in 2021, is the increase of one computer per learner, because of microlearning approaches. One-to-one supplies educators the flexibility to supplementation the core curriculum with interactional online content to produce more highly moderated lessons. [6][8]. One Laptop Per learner has been very an impact (computer not smart phone)[3], in increasing the number of learners with a device across the globe. In Iraq with the numbers of smart phone holders I 100% of the population, and can achieve this subject. But to use these devices efficiently, we must provide good internet service and computers. It is recommended if we can supply classroom with Screen beam's Classroom Commander, which enables teachers and learners to work in a completely interactive, graceful classroom. [21]. For example, teachers can, frankly, move across the room while presenting, watching student reactions and understanding (*unfortunately, we do not have it in Iraq, but we are going to gain it*). Classroom Commander Collaborations help educators to use their own proficiency more efficiently than ever before.

VIII. CONCLUSION

The previous 17 years have just been cancelled by Iraq, and the long, daunting path towards the real rebuilding of Iraq is beginning again[6]. Building the sustainable society is the most difficult job among the other rebuilding operations. [3]. [26].

In conclusion, the three fundamental components are the rationale for the progress of Iraqi higher education. There are, at the moment of crisis, the teachers, the educators, and the good administration. All has worked together to accomplish what has been accomplished.

During Covid19, MOHESR improves the efficacy of the teaching and learning process towards true learning achievements.[23],[24].[25]

We have to concentrate on education in order to create society again, and the modern 21st century focuses on schooling and what learners have to learn rather than the other elements of the education process[3].

There are many reasons for the limited progress of implementing the roadmap or policies that have been published under the oversight of international bodies and international organizations, and they are:

-The most challenging economic condition faced by Iraq as a nation because of low oil prices and military spending in previous years to expel terrorist groups.

-The social culture's weakness between the ends of the equation, the pupil and the teacher.

- Missing experience and consultancy in investing in emerging technology techniques in higher education growth in Iraq.[25].

- The generalization and use of e-learning is, and is absent, a decision of the central government at the highest levels of government decision-making. The legislative authority must use and preserve the rights of intellectual property, the scientific preservation of writers and teachers across the branches of the executive government to disseminate the rule of the legislature.[24].

With the lowest need for infrastructure now in the world [2] [19], it has become possible to adopt and implement and develop educational systems through the available and the simplest means and tools of technology, which are inexpensive nowadays. [19].

d- Summary to be achieved urgently

- Analyze Current Regulations of e-learning and distance education as online learning in Iraq.
- Formulate E-Learning Policies in Iraq.
- Formulate E-Learning Technical Standards according to the ICT situation now in the learning institutions.
- Formulate E-Learning Instructional Standards.
- Formulate E-Learning Disability Standards.
- Develop Accreditation Criteria E-Learning Programs. (according to the international academic standards).
- Establish National Digital Library, E-Learning Faculty. (as a software and programs have been done).



Figure no. 12: The Iraqi higher education planning for the next academic year 2020-2021

Hundred of papers and researches results, said it was kind of impossible to adopt e-learning in Iraq. But a plan start in June 2019 to adopt e-learning in Iraqi universities which was well planned, and a professional team starts executing the project, is now in July 2020, are in the way to success.

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