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ابحاث المؤتمر العلمي الدولي الرابع المشترك الثاني

”المستجدات الحديثة في التعليم العالي في ظل التعليم الالكتروني“

(المجلد الثاني) 17-16 كانون الاول 2020



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The Application and Challenges of Using E-Learning in Teaching at Iraqi Universities During The Coronavirus (Covid-19)

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The spread of Covid-19 virus recently caused universities and schools to close. As a result, face-to-face interaction between teachers and students becomes difficult as both interactants must stay at home to avoid infection. To this end, finding an alternative method of teaching and learning comes to be an urgent need. The only method that can serve this purpose is the use of e-learning resources. However, applying this method is a challenge to teachers as it requires them to possess high knowledge, experience, and intention to use such a method of teaching. The objectives of this study are to determine the readiness of Iraqi teachers to adopt e-learning in their education process and the challenges that might hinder their use of this method in their university courses. A purposive sample consisted of 60 faculty members from three universities participated in the study. Following TAM model, the data were collected using an adapted questionnaire that collected the teachers' responses regarding the application and challenges of using e-learning at a university level from various viewpoints, such as the teachers' perceived usefulness and perceived ease of use which might affect their belief, attitude, and intention to use. The findings showed that the use of e-learning in Iraqi universities can substitute face-to-face classroom interaction if the challenges that hinder such an alternative method are eased and made available for teachers. By shedding lights on the use of e-learning, this study presented a number of pedagogical implications and recommendations to improve this method and make it a possible method of teaching and learning in Iraqi universities.

تطبيق وتحديات التعليم الالكتروني التي تواجه التعليم في الجامعات العراقية خلال انتشار فيروس كورونا المستجد

ان انتشار فيروس كورونا المستجد (Covid-19) في الاونة الاخيرة ادى بالجامعات والمدارس لاجلاق ابوابها بوجه الطلبة. وكنتيجة لذلك فان التعليم عن طريق المواجهة اصبح صعبا حيث ان الطلبة والمعلمين اجبروا على البقاء في المنازل لتجنب انتشار الوباء. وبناء عليه، فقد اصبح ايجاد اسلوبا بديلا للتعليم والتعلم ضرورة ملحة. والبديل الوحيد القادر على ان يخدم هذا الغرض هو تبني مصادر التعليم الالكتروني (e-learning). ولكن هذا النوع من التعليم يشكل تحديا للمعلمين لانه يتطلب من منهم قدرا عاليا من المعرفة والخبرة وكذلك توفر الرغبة في استخدام هذا الاسلوب. تهدف هذه الدراسة الى تحديد مدى جاهزية المعلمين العراقيين لتبني التعليم الالكتروني في العمارة التعليمية وكذلك الوقوف على التحديات التي من الممكن ان تقف عائقا في طريق استخدام هذا الاسلوب من التعلم على المستوى الجامعي. تكونت عينة البحث الهادفة من 60 عضو هيئة تدريس لدى ثلاث جامعات عراقية. باعتماد نموذج TAM، تم جمع البيانات باستخدام استبيان معدل من الدراسات السابقة والذي هدف الى اخذ ردود افعال المعلمين فيما يتعلق بتطبيق وتحديات التعليم الالكتروني على المستوى الجامعي من عدة جوانب تضمنت فحص مدى رؤية المعلمين بفاعلية الاسلوب وسهولة تنفيذه والتاثيرات على ايمانهم وتوجههم ونيتهم في استخدامه. اظهرت النتائج بان التعليم الالكتروني قادر على ان يحل محل اسلوب المواجهة التقليدي شرط ان يتم التغلب على



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معوقات هذا الاسلوب. ويتسلط الضوء على استخدام التعليم الالكتروني في هذه الدراسة تكون هذه الدراسة قدمت عدد من التوصيات التعليمية لتحسين استخدام هذا الاسلوب وجعل تنفيذه ممكننا كاسلوب للتعليم والتعلم في الجامعات العراقية.

1. INTRODUCTION

In recent years, the use of computers and Internet technologies in learning has proven to be useful and critical to the development of learners' autonomy (Çelik, Arkin, & Sabriler, 2012), production and competence (Sabzian & Gilakjani, 2013), acquisition (Chien, 2011) among other aspects of learning. Accordingly, the computers and internet resources and applications become an important part of students' academic life as they are used to motivate students and help them to engage in the classroom practices. Chan (2006) maintained that the use of the computers for education purposes to improve language learning has proven efficiency in the development of student' academic performance. In learning languages, this technology plays facilitative roles in improving learners' competencies over reading (Coiro, 2008), listening (Urmia, 2012), and speaking skills (Terrell, 2012). Golshan and Tafazoli (2014) considered the use of technology in learning a powerful facilitating tool because it can provide learners with access to knowledge and encourages them to create and construct new aspects of meaning and knowledge. The use of e-learning has become more important and even the only source for learning and instructions in school and universities with the wide-spread of Covid-19 virus all over the world. This pandemic crisis caused schools and universities to close which consequently made the face-to-face interaction between teachers and students difficult as both interactants must stay at home to avoid infection. In spite of the necessity to adopt e-learning as the only substitute to face-to-face instructions, Iraqi teachers and learners are still far below the international standards of readiness, motivation, and ability to adopt or adapt to online learning. In fact, Iraqi teachers are accustomed to offline teaching and online teaching for these teachers are an unprecedented experience. Further, the use of technologies or e-learning in Iraqi universities and even elsewhere around the world is limited to add-on purposes and not for a substitute of conventional classrooms. To this end, adopting e-learning in education requires facilitating the process by controlling various factors, such as the cost of computer devices, internet fees, equipment, and training. It is therefore timely to investigate such an issue to find out ways of encouraging these learners accommodate for the new method of teaching and figure out the barriers that might hinder the adoption of it among these teachers in order to create better leaning environments for students.

A number of recent studies attempted to investigate the possibility of applying e-learning in educational institutions around the world. Radha, Mahalakshmi, Kumar, and Saravanakumar (2020) surveyed 175 students across the world in an attempt to find out solutions to improve the self-study skills of students during the crisis of COVID-19. The findings showed that e-learning



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among the students who are familiar with web-based learning is acceptable method for learning. Such a method can provide students with effective learning experience as the students' responses reflected their interest of using E-learning resources to improve their performance.

Chang and Fang (2020) surveyed Chinese teachers to obtain their responses about the difficulties and possible solutions of applying e-learning and instructions during Coronavirus Diseases. This is mainly due to two reasons. First, teachers possess low skill of computers and internet-based applications. Second, the teachers hold low preference on online teaching. The researchers concluded that the teachers are still not ready to accept or adopt to the new method of teaching and students' learning behavior cannot be changed in such a short period of time.

Almanthari, Maulina, and Bruce (2020) attempted to elicit Indonesian teachers' views about the possibility and barriers of implementing e-learning during the COVID-19 pandemic. Four barriers were investigated including teachers, schools, curriculum and students. 159 teacher-respondents were surveyed from schools in Indonesia. The findings from teachers' perspective suggested that the main barrier for implementing e-learning resided in the students. the students lack of the knowledge and skill in using e-learning, and lack the access to devices and internet connection.

In Saudi Arabia, Hoq (2020) attempted to understand how e-learning can fill the gap in education in light of the pandemic (COVID-19). A survey was administered to university teachers to determine their preference towards the use of e-learning during academic courses. The findings showed that most of the teachers held positive opinion regarding the use of e-learning method as it saved their time and effort. Small portion of teachers reported their reservation to implement e-learning as a result of their lack of confidence to use the technical devices. Even those who supported the idea expressed their need to receive adequate training and workshops to create effective and efficient teaching outcome.

Due to the suspension of face-to-face education and the shift to an online instructions in the curriculum the Philippines, Baticulon et al. (2020) identified the barriers that hinder the adoption of e-learning among the medical students. A questionnaire was designed to elicit the students' perceptions. The analysis of the questionnaire revealed five types of barriers, namely, the technological, individual, domestic, institutional, and community barriers.



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2. RESEARCH QUESTION

This general aim of this study was to investigate the readiness of Iraqi university teachers to adopt the e-learning courses in their academic courses and to determine the barriers that might limit the use of such kind of teaching in Iraqi universities. The following research questions are asked:

- 1) What is the Iraqi teacher's attitude towards using e-learning in teaching at Iraqi Universities?
- 2) What are the barriers that limit the use of the e-learning in teaching at Iraqi universities from Iraqi teacher's perspectives?

3. METHODOLOGY

In this study, a quantitative approach was followed using a questionnaire as an instrument for data collection (Creswell, 2012; Fraenkel, Wallen, & Hyun, 2011). Fraenkel et al. (2011) noted that collecting data quantitatively can provide reliable and objective findings that can be generalized. Based on the objectives of this study and following previous research by Elzaalouk (2010), two independent variables are investigated to answer the two research questions. The first independent variable (IV1) is the teachers' readiness towards using e-learning in their university courses. This variable examined four scales of teachers' readiness, namely their level of anxiety, preference, ease of use, and usefulness of e-learning courses. The second independent variable (IV2) is the barriers that might hinder the adoption of e-learning in academic courses. This variable included the investigation of the equipment, cost, skills, and motivation. Following the Technology Acceptance Model (TAM) by Davis, Bagozzi, and Warshaw (1989), these two variables are investigated to determine their impact on the teachers' attitude to accept e-learning courses as a method of teaching at a university stage as a dependent variable (DV). The questionnaire was designed using Google Forms and consisted of 36 items written in five-point Likert scale that elicited the teachers' level of agreement ranging from 'strongly disagree' to 'strongly agree'. A Cronbach's Alpha test was conducted to see whether the test items are internally consistent and can yield reliable results. The results (see Table 1) showed that the first subscale (Part A: level of teachers' readiness to implement e-learning) which consisted of 22



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items is reliable ($\alpha = .937$). The second subscale (Part B: the barriers that limit the use of e-learning) which consisted of 14 items was also reliable ($\alpha = .854$).

Table 1: Summary of Reliability Tests

	Number of Items	Section	Cronbach's Alpha
Readiness	22	A	.937
Barriers	14	B	.854

The questionnaire was written in English and translated into Arabic to suite the language background of the teachers. For sampling, the procedures of recruiting the respondents in this study was made through a random sampling method (Creswell & Clark 2011). A total of 88 Iraqi teachers in three universities (...) were sent an electronic version of the questionnaire via email. Out of this total, 60 faculty members who sent back their responses. All the teachers were Iraqi who speak Arabic as the first language and communicate in both English and Arabic with their students. All the teachers hold at least a master degree in various fields. Most of the respondents had more than 2 years of teaching experience.

4. FINDINGS

The analysis in this study was concerned with investigating the readiness of Iraqi university teachers to adopt the e-learning courses in their academic courses and determining the barriers that might limit the use of such kind of teaching in Iraqi universities. For these purposes, the items in the questionnaire were analyzed using the Statistical Package for Social Sciences (SPSS) 22.0 software for descriptive statistics to determine the mean (M), standard deviations (SD) and percentages. To decide on level of attitude (high, moderate, or low), the mean scores of the subjects' responses for each case which ranges from 1-5 were compared to a measurement offered by Hanson, Creswell, Clark, Petska, and Creswell (2005).



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4.1. Iraqi Teachers' Attitude Towards Using E-Learning in Teaching at Iraqi Universities

The first section of the questionnaire measured the Iraqi teacher' attitude towards the use of e-learning for teaching. This section consisted of four sub-scales with a total of 22 items that included the scale of anxiety (3 items), the preference scale (7 items), the ease of use scale (4 items), and the scale of perceived usefulness (8 items). The students were asked to respond to the twenty-two items by providing their level of agreement on a, five-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. The following are the findings.

4.2.1 Scale of Anxiety

In this sub-scale of the questionnaire, the respondents were asked to rate their anxiety level towards the use of the e-learning. Three questions were asked in a five-point Likert scale format. The results of the descriptive statistics tests (Table 2) showed that the Iraqi teachers possess low anxiety rates towards using the e-learning in teaching. They display low anxiety rate (M=1.788, SD=1.023) towards using the e-learning course thinking that such a method of teaching would not cause them any fear. The students also showed low anxiety rates (M=2.061, SD=0.569) expressing that using e-learning for teaching would not annoy them. In response to the last item in this section, the students expressed similar low rates of anxiety (M=1.758, SD=1.001) maintaining that teaching through e-learning courses would not make them nervous. These results indicate that the Iraqi teachers have no objection of adopting e-learning course for teaching. Such courses are welcome by the teachers because these courses would not scare or annoy them and would not make them nervous.

Table 2: Means and Std. Deviation of Anxiety Scale

Items	Means	SD	Level of Agreement
1) Using e-learning for teaching scares me	1.788	1.023	Low Anxiety
2) Using e-learning for teaching bothers me	2.061	0.659	Low Anxiety
3) Teaching through e-learning makes me nervous	1.758	1.001	Low Anxiety



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4.2.2 Scale of Preference

At the preference sub-scale, the descriptive analysis (Table 3) showed that the Iraqi teachers generally prefer the adoption of the e-learning courses in teaching. As shown in the Table, the highest preference rate ($M=4.212$, $SD=.85$) was in response to item 6 in which they prefer to adopt such a teaching method as it allow them to chat with other students using the e-learning forums. This was followed by another high preference ($M=4.15$, $SD=.712$) in item 4 in which they expressed their eagerness for teaching through e-learning. In the third place, the students expressed high preference ($M=4.09$, $SD=.91$) towards replacing the current conventional instructions offered in universities by e-learning instructions. With less preference rates, the students in items 5, 8, 9, and 10 expressed their need for English skill to improve their e-learning performance ($M=4.000$, $SD=1$), their lack of objection towards offering instructions in e-learning using English ($M=3.939$, $SD=0.96$), their preference of teaching through the e-learning than teaching through conventional instruction ($M=3.849$, $SD=0.79$), and lack of objection to provide instructions in the e-learning course in their own language ($M=3.818$, $SD=0.84$) respectively. The results about the students' preference rates showed that there were high preference of teaching e-learning courses to the current conventional methods. This preference was mainly motivated by the ability of the online courses of giving a chance to these teachers to interact with the students virtually. It also motivated by the willingness and eagerness of the teachers to replace the current conventional teaching which is a classroom based with online-based learning as they consider such learning is more interesting than classroom learning.

Table 3: Means and Std. Deviation of Preference Scale

Items	Means	SD	Level of Agreement
4) I am eager for teaching through the e-learning	4.1515	.71244	High Preference
5) I think teaching through the e-learning is more interesting than teaching through traditional instruction	3.8485	.79535	High Preference
6) I like to chat with students through the e-learning forums	4.2121	.85723	High Preference
7) I think using the e-learning to teach is better than using the traditional instructions	4.0909	.91391	High Preference
8) I think I really need English to improve my skill in e-learning.	4.0000	1.00000	High Preference



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9) I prefer e-learning courses to offer instructions in my own language	3.8182	.84611	High Preference
10) I do not mind offering instructions in e-learning using English	3.9394	.96629	High Preference

4.2.3 Scale of Ease of Use

At the ease of use sub-scale, the students were asked to express their opinion about the easiness of implementing e-learning method in teaching. This section was designed to elicit the subjects' perceived ease of use as an important aspect of their attitude. The analysis of this scale (Table 4) showed that the Iraqi teachers find the use of e-learning is easy to use ($M=3.878$, $SD=1.08$). This is conditioned with possessing the essential computer basic skills, such as their ability to save files or create folders using computers ($M=4$, $SD=.93$) or possessing the internet basic skills, such as using search engines, sending/receiving emails, uploading files, etc. and they, accordingly, need proper training on using computers and internet to effectively teach online courses ($M=4.212$, $SD=.96$). The results about the students' perceived ease of use demonstrated that taking e-learning course would be easier and more beneficial to teacher if they possess the basic computer and internet skills. This can only be achieved by receiving basic training on using such skills prior to adopting any e-learning courses.

Table 4: Means and Std. Deviation of Scale of Ease of Use

Items	Mean	SD	Level of Agreement
36) I think e-learning is easy to use	3.8788	1.08275	High Attitude
37) It is essential for learners to possess computer basic skills (e.g., saving files, creating folders) to benefit from the e-learning	4.0000	.93541	High Attitude
38) It is essential for learners to possess Internet basic skills (e.g., using search engines, sending/receiving emails, uploading files) to benefit from the e-learning	4.0000	.93541	High Attitude
39) I need a lot of training on using computers/internet to learn English effectively through e-learning	4.2121	.96039	High Attitude



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4.2.4 Scale of Perceived Usefulness

At the scale of perceived usefulness of e-learning, the Iraqi teachers generally held high positive attitude towards the usefulness of the e-learning courses. As shown in Table 5, the highest attitude was recorded in item 15 in which the teachers thought of teaching through e-learning to be useful in order to improve students' academic performance (M=4.39, SD=0.74). This was followed by possessing high attitude in item 22 towards the usefulness of the e-learning in providing effective learning resources (M=4.21, SD=0.81). In the third position of attitude, the students in items 20 and 21 equally thought of e-learning a useful tool for developing students' critical thinking and self-dependence abilities (M=4.18, SD=0.88). Lower attitude rates were recorded in items 16, 17, 18, and 19. In these items, the subjects thought that e-learning can be a useful classroom activity (M=4.09, SD=0.80), a useful tool for developing students' skills in general (M=3.9, DS=0.95), a useful tool for reinforcing students' motivation (M=4.15, SD=1), and a useful tool for raising students' responsibilities (M=3.96, SD=0.95). These results indicate that the Iraqi teachers perceive e-learning courses useful in developing their students' academic performance. They in fact think of using e-learning a useful tool to develop students' academic performance in general and their abilities of critical thinking, self-dependence, responsibilities, and motivation which provide with effective learning environment.

Table 5: Means and Std. Deviation for Scale of Usefulness

Items	Mean	SD	Hanson et al.'s (2005) Measurement
15) I think teaching through e-learning is useful in improving students' academic performance	4.3939	.74747	High Positive Attitude
16) I think e-learning can be a useful class activities	4.0909	.80482	High Positive Attitude
17) I think teaching through e-learning is a useful tool for developing students' skills in general	3.9697	.95147	High Positive Attitude
18) I think teaching through e-learning is a useful tool for reinforcing students' motivation	4.1515	1.00378	High Positive Attitude



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19) I think teaching through e-learning is a useful tool for raising students' responsibilities	3.9697	.95147	High Positive Attitude
20) I think teaching through e-learning is a useful tool for developing students' critical thinking skill	4.1818	.88227	High Positive Attitude
21) I think teaching through e-learning is a useful tool for developing students' self-dependence	4.1818	.88227	High Positive Attitude
22) I think e-learning is able to provide with effective learning resources	4.2121	.81997	High Positive Attitude

Over the analysis of the four scales of teachers' attitude (Anxiety, Preference, Ease of use, and Perceived usefulness) towards the use of e-learning, the teachers showed high positive attitude towards using the e-learning in teaching. The teachers demonstrated that they do not hold any fear, annoyance, or tension towards using e-learning with low levels of anxiety. They also displayed high levels of preference to use the e-learning courses in their teaching process than using the conventional instructions. Moreover, the teachers reflected high rates of confidence and found e-learning resources easy to use. However, the teachers stressed the necessity to attend training course prior to adopting any online courses in order to provide better teaching outcomes. Finally, the teachers perceived the e-learning useful in improving their students' academic performance in general and certain abilities and skills, such as their critical thinking, motivation, self-confidence, and sense of responsibility. Based on these results, it can be concluded that adopting e-learning as a teaching method by Iraqi teachers can be applied as these teachers held positive attitude towards using it. This would be an important step towards adopting this method in university context.

4.2. E-learning Barriers from Iraqi Teachers' Perspective

The first section of the questionnaire measured the Iraqi teacher' attitude towards the use of e-learning for teaching. In the second section of the questionnaire, the barriers or challenges that might limit the use of e-learning as a method for teaching from the same teachers' perspectives will be determined. The subjects in this section were asked to respond to 14 five-point Likert scale items ranging from 'strongly disagree' to 'strongly agree'. This section was divided into four sub-scales of barriers (a) skills (3 items), (b) equipment (4 items), (c) motivation (5 items),



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and (d) cost (2 items). The purpose of these items was to identify the barriers that might hinder the adoption of e-learning in the teaching process from teachers' perspectives. Similar to the analysis in the first section, SPSS frequency tests was run to do descriptive statistics of the mean (M), standard deviations (SD) and percentages. To report the mean scores of the subjects' responses for each case which ranges from 1-5 levels of agreement, the measurement offered by Hanson et al. (2005) was adopted. The following are the findings.

4.6.1. Skill Barriers

The absence of skill might play important part in the teachers' acceptance of e-learning. The Iraqi teachers in this study reported that possessing low skill in e-learning can be a major barrier that limit their adoption or acceptance of such virtual courses. As shown in Table 6, 80% (M=3.94, SD=.99) of the teachers considered the lack of guidance throughout the e-learning course a major barrier that hinder or limit their use of it. With a similar percentage (79%, M= 3.97, SD=0.85), the students considered the lack of training on using computers a major barrier that limit their use of e-learning as a method for teaching. With less percentage (76%, M= 3.69, SD=.74), the Iraqi teachers considered the lack of training on using the internet a major barrier that limit their use of e-learning. These results indicate that e-learning method can be adopted in case teachers receive proper guidance or follow-up from technical or educational professionals, training on using computers, and training on using the internet applications. Lack of such kind of support can form a barrier that might limit their acceptance of e-learning in their teaching process.

Table 6: Means and Standard Deviation to Skill Barriers

Skill Barriers	Mean	SD	Freq.	Level of Agreement
23) I think lack of technical and educational support throughout the e-learning course can limit my use of it	4.00	0.79	80%	Major Barrier
24) I think lack of training on using computers can limit my use of e-learning	3.97	0.85	79%	Major Barrier
25) I think lack of training on using the internet can limit my use of e-learning	3.69	0.98	74%	Major Barrier



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"المستجدات الحديثة في التعليم العالي في ظل التعليم الالكتروني"
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4.6.2. Equipment Barrier

The implementation of e-learning course required providing teachers with proper equipment or tools, such as the computers, internet connection, and other infrastructure resources either at the faculties or at home. The availability of equipment was a moderate barriers identified by the teachers in the questionnaire. When asked about the role of equipment in the acceptance and adoption of e-learning courses, 76% (M=2.79, SD=1.22) of the teachers considered the lack for the computer equipment and infrastructure required to use the e-learning a moderate barrier that might hinder the adoption of e-learning in their colleges. With similar frequencies (71%, M=2,5, SD 1,12), the teachers considered the lack of computer equipment and infrastructure at their homes, lack of Internet connection required to use e-learning at college, and lack of Internet connection required to use e-learning at home moderate barriers that might limit their acceptance and adoption of e-learning in their teaching process. These results about the equipment barrier indicate that this barrier is less influential than the skill barrier as the former was major and the latter was moderate. This might be attributed to the fact that the most of the Iraqi universities are well equipped by the computer and Internet connections, which was made available for all Iraqi teachers.

Table 7: Means and Std. Deviation of Equipment Barriers

Equipment Barriers	Mean	SD	Freq.	Level of Agreement
26) My college lacks for the computer equipment and infrastructure required to use e-learning	2.79	1.22	76%	Moderate Barrier
27) There is a lack of computer equipment and infrastructure at my home	2.50	1.12	71%	Moderate Barrier
28) There is a lack of Internet connection required to use e-learning at college.	2.50	1.12	71%	Moderate Barrier
29) There is a lack of Internet connection required to use e-learning at home.	2.50	1.12	71%	Moderate Barrier



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4.6.3. Motivation Barriers

At the personal level, the use of e-learning requires teachers to possess high motivation levels, so they can adopt the new technology as a teaching method. The purpose of the third sub-scale of this section in the questionnaire aimed at measuring the Iraqi teachers' agreement on their motivation level, which might indicate their personal readiness to adopt e-learning in their teaching process. The analysis of this sub-scale (Table 8) showed that the teachers possess moderate to high motivation levels. Around 78% of the teachers considered holding negative beliefs on using e-learning for teaching is a moderate barrier ($M=3.8$, $SD=1.2$). Similarly, 70% of the teachers considered the lack of self-confidence in using the e-learning for teaching is also a moderate barrier ($M=3.48$, $SD=1.25$). Similar percentage of teachers (73%) considered their lack of interest and lack of time necessary for them to conduct e-learning classes moderate barriers with ($M=3.66$, $SD=1.43$) each. The only major barrier that was reported by 80% of the Iraqi teachers was their lifestyle (family, work, or personal schedule) with ($M=4.00$, $SD=.935$). This finding can be attributed to the nature of the university teachers' duties which require them to do a lot of stuff beyond the class, such as supervision, conferences, workshops, among others. The findings about the motivation sub-scale showed that there was a number of barriers that would moderately affect the teachers' motivation, such as holding negative beliefs about using the e-learning, lacking the self-confidence in using e-learning, lack of time available for them to do e-learning, and lack of interest in doing e-learning courses. The findings also reflected the students' high agreement on the role of their life style as a demotivating factor to adopt the e-learning courses.

Table 8: Means and Standard Deviation of Motivation Barriers

Motivation Barriers	Mean	SD	Freq.	Level of Agreement
30) I hold negative beliefs about using the e-learning for teaching	2.30	1.18	78%	Moderate barrier
31) I am not self-confident at using the e-learning for teaching	3.48	1.25	70%	Moderate barrier
32) I lack the interest to use the e-learning in teaching	3.66	1.43	73%	Moderate barrier
33) I think lack of the time available to me can limit my use of e-learning	3.66	1.43	73%	Moderate barrier



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34) My lifestyle (family, work, or personal schedule) makes it difficult for me to conduct e-learning courses	4.00	.935	80%	Major barrier
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4.6.4. Cost Barriers

The last barrier that is measured in the second section of the questionnaire was the cost barrier. The findings (Table 9) showed that 80% of Iraqi teachers agree that both the high cost of accessing the Internet at home as well as the high cost of computers devices are major barriers (M=4,0, SD=.935) that hinder their use of the e-learning. These findings about the cost factor showed that the high cost of accessing the Internet, high cost of computer devices, and low cost of e-learning charges would be a barrier for them to take e-learning course.

Table 9: Means and Standard Deviation of Cost Barriers

Cost Barriers	Mean	SD	Freq.	Level of Agreement
35) The high cost of accessing the Internet at home limits my use of the e-learning	4.00	.935	80%	Major Barrier
36) The high cost of computers devices limits my use of the e-learning	4.00	.935	80%	Major Barrier

In this section of the questionnaire, a number of barriers were investigated. These barriers were seen by the Iraqi teachers limiting their acceptance and adoption of e-learning in the education process. Four types of barriers were measured including the skill, equipment, motivation, and cost barrier. The students' responses to these barriers was moderate to major indicating that unless these barriers were controlled, teachers would not be ready to take the e-learning courses. The findings about the skill barrier showed that using e-learning can be a major barrier in their adoption of e-learning. They believed that if the teachers' skill in using the computer and internet was developed as well as if they received proper follow-up by the technicians during the courses, the skill barrier can be illuminated. For the equipment factor, the students showed moderate agreement on the role of equipment in taking e-learning courses. The students' believed that



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taking such courses requires well-developed classes at their faculties or make the equipment available at their homes. For the motivation barrier, the students believed that they are ready to take the courses because they hold positive beliefs about such online course, they feel self-confident, and they have the interest and time to do e-learning courses. Regarding the cost barrier, the teachers believe that this barrier should be controlled by affording free-of-charge internet at homes since teachers as well as students are required to conduct the course in different times and locations. They also believe that the computer devices should be made available for teachers to conduct on-line courses.

5. CONTRIBUTION TO THE LITERATURE

This study investigated the implementation of e-learning in teaching among Iraqi teachers during the Covid-19 pandemic. Therefore, this study shed some lights on the Iraqi teacher's attitude and readiness to adopt such a teaching method in higher education, thus added to the literature regarding capability of implementing such courses remotely during this pandemic. Further, this study is the first study in Iraq to investigate the possible barriers that might hinder the implementation of e-learning in the Iraqi universities. Determining the barriers from teachers' perspectives would inspire the education system and decision makers in Iraq to find urgent solutions to eliminate the barriers and help implementing e-learning in university setting.

6. CONCLUSION

The present study outlined two aspects of e-learning adoption process during the Coronavirus (Covid-19). The first aspect is the teachers' readiness, attitude, and acceptance of e-learning and the second one is the barriers that might limit such adoption. The findings showed that the Iraqi teachers think positively of adopting such novel method for teaching. They, in fact, consider it useful for teachers and students in various aspects. Meanwhile, holding a positive attitude towards the adoption of e-learning is not enough condition to implement it. Taking serious and practical actions to illuminate the barriers that can limit the adoption of this method are also required. Controlling the conditions of implementing e-learning would yield acceptable and meaningful teaching experience for teachers and quality learning for learners. It is recommended that decision makers in the higher education of Iraq arrange training sessions for teachers in order for them adapt to the use of technologies in their teaching process and in order to be more interested in using new technologies. It is also suggested that the authorities in Iraq work hard to cut the internet charges and reduce the cost of computers to enable the teachers reach the teaching



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resources. Announcing incentives to encourage teachers to adopt the new technologies would be also of a great value.

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