



IRAQI
Academic Scientific Journals



العراقية
المجلات الأكاديمية العلمية

ISSN: 2663-9033 (Online) | ISSN: 2616-6224 (Print)

Journal of Language Studies

Contents available at: <http://jls.tu.edu.iq>



Perceptions of Iraqi Students about Using WhatsApp for Learning during Covid-19

Dr. Wasan Khalid Ahmed*

University of Fallujah - College of Islamic Sciences

wasan.khalid@uofallujah.edu.iq

&

Dr. Ayad Hammood Ahmed

University of Fallujah - University Presidency

Scholarships and Cultural Relations Dep.

Ayadhmd@uofallujah.edu.iq

&

Dr. Zainab Abbodi Ali

Southern Technical university in Basrah - college of Health and Medical Techniques

zainababudiusm@gmail.com

Received: 24/ 6 /2021, Accepted: 1 /7 /2022, Online Published: 31 /8/ 2022

Abstract

The spread of Covid-19 virus has complicated the education process as face-to-face communication in class has become more difficult. In light of this issue, the advancement in internet and social media applications has offered a possible and effective substitution for communication and learning between teachers and students. WhatsApp is one form of the social media application that arises to be an easy

* **Corresponding Author:** Dr. Wasan Khalid Ahmed , **Email:** wasan.khalid@uofallujah.edu.iq

Tel: +9647823637094, **Affiliation:** University of Fallujah -Iraq

way to connect teachers and students virtually and an effective method to communicate the visual and written materials to students online. Although 74.5% of the Iraqi people are social media users in January 2020 (Hootsuite & We Are Social, 2020), using WhatsApp as a means for learning is not without issues. This study aims at investigating the frequency of using the application, the effectiveness of the application in the learning process, the preference of using such an application from the students' perspectives, and the barriers that might hinder the use of this application in Iraqi learners' environment. For these purposes, the data was collected by means of a questionnaire developed based on previous studies in using social media for learning. A random sample of 1200 Iraqi school students were selected from three Iraqi schools. The data were analyzed using SPSS in order to find out the means and frequencies. The findings showed that the majority of students (91.7%) use WhatsApp for educational purposes. Almost two-thirds of students showed preference to use the application in their educational settings in various aspects, such as sharing information and study materials, submitting homework and assignments, discussing study course topics with their classmates or teachers, and enquiring about exams and assignments dates. The findings also showed that a number of barriers limit the use of this application in learning, such as the poor internet connection in certain areas in Iraq, the high cost of smart phones and laptops, and the students' motivation to use the technology in for education purposes. The findings in this study emphasized the vital role of social media application in the area of education.

Keywords: Attitude, Barriers, Learning online, Social media application, WhatsApp

تصورات الطلاب العراقيين حول استخدام WhatsApp للتعلم خلال جائحة Covid-19

د. وسن خالد احمد

جامعة الفلوجة / كلية العلوم الإسلامية

د. اياد حمود احمد

جامعة الفلوجة - العلاقات الثقافية

د. زينب عبودي علي

الجامعة التقنية الجنوبية في البصرة / كلية تقنيات الصحية و الطبية

الملخص: أدى انتشار فيروس Covid-19 إلى تعقيد عملية التعليم حيث أصبح التواصل وجهاً لوجه داخل الفصل الدراسي أكثر صعوبة. في ظل هذه الازمة، قدم التقدم في الإنترنت وتطبيقات الوسائط الاجتماعية بديلاً ممكناً وفعالاً للتواصل والتعلم بين المعلمين والطلاب. يعتبر تطبيق WhatsApp أحد أشكال تطبيقات الوسائط الاجتماعية والتي اثبتت بانها طريقة سهلة لربط المعلمين والطلاب افتراضياً وطريقة فعالة لتوصيل المواد المرئية والمكتوبة عبر الإنترنت الى الطلبة. على الرغم من أن 74.5% من العراقيين هم من مستخدمي وسائل التواصل الاجتماعي في كانون الثاني (يناير) 2020 (Hootsuite & We Are Social، 2020)، فإن استخدام WhatsApp كوسيلة للتعلم لا يخلو من المشكلات. تهدف هذه الدراسة إلى قياس مدى استخدام التطبيق

وفعاليتها في عملية التعلم. كما تهدف الدراسة الى معرفة مدى رغبة الطلاب باستخدام هذا التطبيق والوقوف على المعوقات التي تحول او تقلل من قابلية استخدام هذا التطبيق بين الطلبة العراقيين. لتحقيق هذه الاهداف، فقد تم جمع البيانات بواسطة استبانة تم تطويرها بالرجوع الى الدراسات السابقة في مجال استخدام وسائل التواصل الاجتماعي للتعلم. وقد تم اختيار عينة عشوائية قوامها 1200 طالب وطالبة من ثلاث مدارس عراقية وتحليل هذه البيانات باستخدام برنامج SPSS. أظهرت النتائج أن غالبية الطلاب (91.7%) يستخدمون واتساب لأغراض تعليمية. كما أظهرت النتائج ان ما يقرب من ثلثي الطلاب يفضلون استخدام هذا التطبيق للتعلم في جوانب مختلفة مثل مشاركة المعلومات والمواد الدراسية ، وتقديم الواجبات ومناقشة الموضوعات الدراسية مع زملائهم في الفصل أو مع المعلمين والاستعلام عن الامتحانات ومواعيد الواجبات. كما أظهرت النتائج أن عددًا من المعوقات تحد من استخدام هذا التطبيق في التعلم مثل ضعف الاتصال بالإنترنت في مناطق معينة في العراق وارتفاع تكلفة شراء الهواتف الذكية وأجهزة الكمبيوتر المحمولة ، وعدم توفر الدافعية لدى الطلاب لاستخدام التكنولوجيا لأغراض التعلم لهذه الاسباب. أكدت نتائج هذه الدراسة على الدور الحيوي لتطبيق وسائل التواصل الاجتماعي في مجال التعليم.

الكلمات الدالة: الموقف، العوائق، التعلم عبر الإنترنت، تطبيق الوسائط الاجتماعية، واتساب .

1- Introduction

There is no doubt that social media applications, such as WhatsApp, Facebook, or Instagram have begun to shape people's ways of thinking and occupy their means of communication. These applications have become very popular among all ages especially the young people who adopted these application to express themselves and interact with the surrounding world. Boyd and Ellison (2007) noted that the purpose of social media programs is to provide numerous chances for users to exchange social feedback and enhance social relations. The huge number of users from diverse world populations indicates clearly the immense need for these applications to establish the social structure and transform it from reality to cybernetic environment, thus, eliminating the time and space limitations. The spread of Covid-19, which caused many schools around the world to close, extended the functions of social media applications to include education. With absence of classroom interaction, the social media applications turn to be the only solution to substitute face-to-face interaction with virtual interaction. The use of these applications extended the communication beyond the classroom's time and space. WhatsApp, as one of the common social media applications, has been utilized to play an essential role in teaching. This application helps teachers and students to communicate virtually in order to maintain secure distancing during the virus crises. Furthermore, utilizing this application has enabled teachers to send online teaching videos, assign tasks and homework to students, and communicate exams and assignments dates. In fact, the use of WhatsApp, as a social media technology, has provided an easy-to-use solution to sort out the current problems of education (Annamalai, 2019; Cetinkaya, 2017). Although adopting this technology in

classrooms has become an urgent need, Iraqi students and teachers still need to develop their readiness, motivation, and ability to adopt this technology to the best in classrooms. Moreover, adopting WhatsApp in education requires controlling various factors, such as the cost of smartphones and internet fees, provision of equipment, and training. To this end, it is important to investigate these issues in an attempt to clarify the students' actual use of WhatsApp in classrooms, their attitude and preference towards using this technology for education purposes. and the barriers that might hinder the adoption of this technology in order to create better leaning environments for students.

A number of studies have focused on using social media and technology for educational purposes. Cetinkaya (2017) conducted a study to determine the impact of using WhatsApp for education purposes from the students' perspectives. The quantitative data was collected through a pretest-posttest experimental design. The findings supported the idea that using WhatsApp can reinforce the traditional learning and increase students' success. The findings also showed that the students posited positive attitude towards the use of WhatsApp during their learning process. Learning interactively using the images can help them unconsciously become more effective learners. Nevertheless, using WhatsApp had a number of barriers, such as the posts timing and the redundancy in the created groups.

Mbukusa (2018) explored the use of WhatsApp for educational purposes from Namibian undergraduate students' perspectives. The data were collected by means of a 24-item questionnaire developed to measure the students' attitudes, utility and behavior towards using WhatsApp. The findings revealed that the students generally found it an enjoyable experience. Further, WhatsApp can be a useful source of learning by attracting the students' attention and encourage their contribution and participation in classroom and out classroom with friends. However, WhatsApp can impact students who do not have smartphone negatively. It can also distract students' study schedule of activities, preparation, and assignments. The students stressed their demands of internet amenities so that they become able to use WhatsApp freely and continuously.

Annamalai (2019) investigated the possibility of using of WhatsApp as a means of learning in a blended learning classroom among 5 Malaysian university students. The study focused on identifying the students' reflections about the use of WhatsApp and its strengths and challenges. The data were collected qualitatively in the form of reflections received from students over 14 weeks. The findings reflected that most of the university students prefer to use WhatsApp for education purposes. The students maintained that the use of this technology can support conventional learning in various ways, such as giving students the opportunity to interact freely in any time and place, assimilate and extend the actual face-to-face classroom discussion, and access the classroom lessons repeatedly as they wish. However, the students noted that adopting WhatsApp in learning is not without issues. These issues included the overloaded messages, identifying the message senders, and the technical problems related to the internet connection and the loss of messages in case of smartphone damage or loss.

In a school setting, Hershkovitz, Elhija, and Zedan (2019) investigated the role of WhatsApp in extending the communication between teachers and students beyond the classroom. The focus of the study was on determining the impact of using WhatsApp on the student-teacher relationship and classroom environment. For this purpose, 300 school students were surveyed using a questionnaire. The findings showed that communication using WhatsApp can contribute to classroom environment due to the distinctive features of

this application. It can meet the students' need in having close and meaningful relationship with their teachers and develop their sense of belonging to school.

Damanik (2020) investigated the use of WhatsApp as a social media application in teaching and learning process. The purpose of the study was to analyze the undergraduate students' attitude towards the use of this application in their learning. The data were collected by means of 12-statement questionnaire. The findings showed that the students hold a positive attitude toward the use of WhatsApp in their classes. The students believed that WhatsApp application can help develop their language learning and encourage them to express their ideas freely and share them with friends.

As the review of previous research showed, the use of WhatsApp in education process started to occupy an important status in education. However, previous research has focused on investigating the use of WhatsApp either among university students or as an extracurricular activity outside the classroom boundaries. Investigating such a role in a school setting and as a main method of teaching and communication at the time of Covid-19 is still need to be conducted.

2- Research Questions

The main purpose of this study is to investigate the frequency and attitude of Iraqi school students to adopt WhatsApp in their educational setting and the barriers that might hinder the use of such kind of applications during the crisis of COVID-19. The following research questions are asked:

- 1) What are the frequencies of using WhatsApp among Iraqi school students for educational purposes?
- 2) What is the Iraqi students' attitude towards the use of WhatsApp for educational purposes?
- 3) What are the barriers that might hinder the use of WhatsApp for educational purposes among Iraqi students?

3- Methodology

This study employs a quantitative method that utilizes a questionnaire for data collection (Creswell, 2012; Fraenkel, Wallen, & Hyun, 2011). Creswell (2012) noted quantitative methods can yield more reliable and objective findings for generalization purposes. The questionnaire was developed by the researcher based on the Technology Acceptance Model (TAM) by Davis, Bagozzi, and Warshaw (1989) and the previous studies on the use of social media in education. The questionnaire consisted of 46 items that covered three major parts. The first part consisted of 11 items that measured the frequencies of the students uses of WhatsApp for social (6 items) and education purposes (5 items). The second part of the questionnaire measured the students' attitude towards using WhatsApp for learning purposes. This section consisted of three sub-scales including the perceived usefulness (9 items), perceived ease of use (6 items), and preference of use (5 items). The last major part of the questionnaire measured the barriers that might hinder the use of WhatsApp for learning. This part consisted of five sub-scales that included the skill barriers (1 items), equipment barriers (3 items), motivation barriers (6 items), cost barriers (2 items), and technical barriers (4 items). The three part in the questionnaire formed the independent variables that were investigated to answer the three research questions. Following the

Technology Acceptance Model (TAM) by Davis et al. (1989), the independent variables of readiness and barriers are investigated to determine their impact on the students' attitude towards accepting WhatsApp as a method of learning at a school stage as a dependent variable (DV). The questionnaire was created using Google Forms and written in a five-point Likert scale that elicited the students' level of agreement that ranged from 'strongly disagree' to 'strongly agree'. A Cronbach's Alpha test was conducted for each main scale to test the internal consistency and items reliability. As it is shown in Table 1, the first part of the questionnaire which consisted of 11 items (Part A: frequency of using WhatsApp) is reliable ($\alpha = .901$). The second subscale (Part B: Readiness to use WhatsApp) which consisted of 21 items was reliable ($\alpha = .937$). For the last scale (barriers that limit the use of WhatsApp) which consisted of 16 items was also reliable ($\alpha = .854$).

Table (1) Summary of Reliability Tests

Scale	Number of Items	Section	Cronbach's Alpha
Frequencies of use	11	A	.901
Readiness	21	B	.937
Barriers	14	C	.854

The questionnaire was written in English and translated into Arabic to suite the language background of the students. For sampling, a random sample of 1200 Iraqi school students were selected from three Iraqi public schools. The students were studying in elementary and secondary stages (Grades 7 to 12). With the assistance of their teachers, the students were asked to respond to an electronic version of the questionnaire that was sent in a form of a link via the groups that were created by the teachers. Out of the 1200 students, 983 students sent back their responses. The items in the questionnaire were analyzed using the Statistical Package for Social Sciences (SPSS) 22.0 software for descriptive statistics to determine the frequencies (f) of using WhatsApp. SPSS was also used to calculate the mean (M), standard deviations (SD) and percentages of the students' attitude and the barriers. 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).

4- Findings

This study investigated a number of issues related to using WhatsApp in educational setting among Iraqi school students. This included determining the frequencies of using WhatsApp for communication or educational purposes, the readiness and attitude of the students towards the use of this application to learn online, and the barriers that might hinder or limit the use of this type of social media applications in schools. 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 and the degree of the barrier (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 et al. (2005). The following are the findings.

A. Frequencies of using WhatsApp among Iraqi school students

The first part of the questionnaire measured the frequencies of using WhatsApp by the Iraqi school students. This part consisted of two sub-scales with a total of 11 items written in a five-point Likert scale ranging from ‘strongly disagree’ to ‘strongly agree’. In the first sub-scale, the students were asked to respond to 6 items that measured their actual use of WhatsApp for social purposes. In the sub-scale, the students were asked to respond to 5 items that measured their actual use of WhatsApp for educational purposes.

1- Use of WhatsApp for communication purposes

As shown in Table 2, the Iraqi school students used WhatsApp most frequently for communication purposes especially when they communicate with their friends/relatives (89%), finding new friend/classmates (8.2%), and joining groups with shared interests (86.2%). In lesser frequencies, the Iraqi school students use WhatsApp to share information and news with their friends (85.4%), meet their past friends/classmates (83.3%), and update the events of their previous school and former classmates (82.9%).

Table (2) Frequencies of using WhatsApp for communication purposes

#	Items	M	SD	%
1	I use WhatsApp to communicate with my friends/relatives	4.45	0.637	89.0%
2	I use WhatsApp to meet friends/classmates I haven't been in touch with for a while	4.16	0.996	83.3%
3	I use WhatsApp to find new friends/classmates	4.31	0.777	86.2%
4	I use WhatsApp to share information and news with my friends	4.27	0.791	85.4%
5	I use WhatsApp to join groups to communicate about common interests	4.28	0.769	85.6%
6	I use WhatsApp to update the events of my previous school and former classmates	4.14	0.829	82.9%

These findings indicate that WhatsApp as a social media application is frequently used by Iraq school students to connect socially with their surroundings. It becomes an essential part of their lives to connect with the past, present and future. Since the students are familiar with using WhatsApp for communication and educational purposes, it can be concluded that this application can be employed to support the students' learning process.

2- Use of WhatsApp for educational purposes

In Table 3, the frequencies of using WhatsApp for educational purposes are reported. As it is shown in the Table, the majority of the Iraqi students (94.0%) use WhatsApp for learning purposes. They mainly use it more frequently to follow up my study subjects with my teachers (93.7%). At the same rates. The Iraqi students reported using the application to increase their performance in their courses and to obtain up-to-date information and news

about their lessons and school activities at (91.0%) each. At a lesser rate, the students reported using WhatsApp to communicate and share information with their classmates.

Table 3: Frequencies of using WhatsApp for educational purposes

#	Items	M	SD	%
7	I use WhatsApp for learning purposes	4.70	0.460	94.0%
8	I use WhatsApp to follow up my study subjects with my teachers	4.68	0.468	93.7%
9	I use WhatsApp as a means to increase my performance in my courses.	4.55	0.500	91.0%
10	I use WhatsApp to communicate and share information with my classmates.	4.10	0.744	81.9%
11	I use WhatsApp to obtain up-to-date information and news about my lessons and school activities	4.55	0.500	91.0%

These findings in this section indicate that the use of WhatsApp is not limited to its usage as social applications as explained in the previous section (Refer to Table 2), but its role has been extended to serve a number of academic purposes. This role has been motivated by the spread of Covid-19 to help students connect with their teachers distantly from their homes.

B. Iraqi Students' Attitude Towards Using E-Learning in Teaching at Iraqi Universities

The second section of the questionnaire measured the Iraqi school students' attitude towards the use of WhatsApp in their learning process at three sub-scales with a total of 20 items. At the first sub-scale, the students were asked to evaluate their level of agreement on 9 statements about their perceived preference of using WhatsApp for learning. In the second sub-scale, the students reported their level of agreement upon WhatsApp ease of use in 6 statements. In the last sub-scale of attitude, the students responded to 5 statements that reflected their preference level of using WhatsApp in their learning process. The following are the findings.

3- Scale of Perceived Usefulness

At the scale of perceived usefulness of WhatsApp (Table 4), the Iraqi school students perceive the application useful in various aspects. Most importantly, they perceive the application useful for online teacher-student communication and for providing rich multimedia resources to improve educational experience (94%). The students also perceive WhatsApp highly useful in serving other academic functions, such as communicating class or school announcements (93.7%), communicating with their classmates as well as delivery of course content and resources (92.5%), in addition to improving learning skills in general (91.0%). At fewer rates, the students perceived the application reinforcing group work (86.3%), help sharing a wide variety of learning materials with others as well as encouraging classroom discussions (85.0%).

Table (4) Scale of perceived usefulness

#	Items	M	SD	%	Level of Agreement
12	WhatsApp is useful to communicate with my classmates	4.63	0.486	92.5%	High
13	WhatsApp is useful for online teacher-student communication	4.70	0.460	94.0%	High
14	WhatsApp is useful for classroom discussions	4.25	0.785	85.0%	High
15	WhatsApp is useful for the delivery of course content and resources	4.63	0.486	92.5%	High
16	WhatsApp is useful for communicating class or school announcements	4.68	0.468	93.7%	High
17	WhatsApp is useful for providing rich multimedia resources to improve educational experience	4.70	0.460	94.0%	High
18	WhatsApp is useful for sharing a wide variety of learning materials with others	4.27	0.753	85.4%	High
19	WhatsApp is useful for student group work	4.32	0.779	86.3%	High
20	In general, WhatsApp is useful in improving my learning skills	4.55	0.500	91.0%	High

The findings in this section indicates that the Iraqi school students hold positive attitude towards the use of WhatsApp in an online environment as they perceive the application useful in developing their academic performance. They in fact think of using WhatsApp a useful tool to develop their academic performance and provide with effective learning environment similar to face-to-face interaction. Perceiving WhatsApp a useful means of communication and learning reflect their acceptance of using technology in online environment.

4- Scale of Ease of Use

The 6 statements in this section aimed at eliciting the students' attitude towards the easiness of implementing WhatsApp for learning online. As it is shown in Table 5, the Iraqi students generally perceive the use of WhatsApp easy to use. More specifically, the majority of the students (96%) highly believe that joining the groups created in WhatsApp is easy, using the application is simple (94%), and uploading or downloading videos, images, and voice messages in WhatsApp (94%) is also easy. At lesser rates, the students highly agree upon the easiness of the interactional process either with the classmates or teachers in WhatsApp and easiness of understanding the various options provided by WhatsApp at around 85%. Due to the easiness of handling the application, the students expressed low attitude toward the need for training on using WhatsApp for learning.

Table (5) Scale of ease of use

#	Items	M	SD	%	Level of Agreement
21	WhatsApp is simple and easy to use	4.70	0.460	94.0%	High
22	It is easy to upload/download videos, images, and voice messages in WhatsApp	4.68	0.468	93.7%	High
23	It is easy to join WhatsApp groups	4.80	0.403	96.0%	High
24	It is easy to interact with classmates and teachers in WhatsApp	4.27	0.791	85.4%	High
25	The various options provided by WhatsApp are easy to understand	4.26	0.776	85.2%	High
26	In general, I need a lot of training on using WhatsApp for learning	2.88	0.910	57.5%	Low

The results about the students' perceived ease of use demonstrated that learning through WhatsApp is possible in Iraqi schools as the students consider this application and its features easy to use and simple to comprehend. Perceiving WhatsApp easy can help students accept this technology as a means of communication and learning outside the classroom environment.

5- Scale of Preference

The descriptive analysis (Table 6) shows that the Iraqi school students highly prefer the adoption of WhatsApp in their learning process. As shown in the Table, the highest preference rate (87.3%) was in item 30 in which they expressed their lack of objection to learn through WhatsApp. The students also expressed their likeness to use WhatsApp for learning (86.2%) and chat with their classmates through the application (86%). At a lesser rate (78.3%), the students believed that learning through WhatsApp is more interesting than face-to-face learning. However, around half of the students (56%) expressed their annoyance of receiving overloaded messages.

Table (6) Preferences scale

#	Items	M	SD	%	Level of Agreement
27	I like using WhatsApp for learning	4.31	0.725	86.2%	High
28	I think learning through WhatsApp is more interesting than learning in class	3.91	1.098	78.3%	High
29	I like to chat with classmates through the WhatsApp	4.30	0.787	86.0%	High
30	I do not mind learning through WhatsApp	4.37	0.484	87.3%	High
31	I do not mind receiving huge number of messages	2.80	0.852	56.0%	Low

Except for their objection to receive huge number of messages or posts, the results about the students' preference rates indicate that there is a general high preference of learning through WhatsApp application. This attitude by the students reflects their acceptance of adopting the new technology in as a method of teaching in virtual classroom. In fact, such a general acceptance is conditioned by controlling the redundant and annoying messages in the study groups. Focusing on learning content and setting rules to participate in the learning groups similar to real classroom could sort out the problem.

The analysis of the three scales of students' attitude (ease of use, perceived usefulness, and preference) reflected a high and positive acceptance the using WhatsApp in learning process. The students' responses were in support of using the application during the Covid-19 crises as the most appropriate and possible method to compensate the face-to-face interaction. This was clear as the application can compensate for face-to-face interaction through the chatting with classmates and demonstrated that they do not hold any fear, annoyance, or tension towards using e-learning with teachers freely and in any time. The use of WhatsApp, from the students' perspective is easy to use, simple, and it does not need much training. The students also expressed their acceptance of WhatsApp as they hold positive beliefs that the application is useful in many facets, such as its ability to encourage communicating with classmates and teachers, extending classroom discussions, delivery of course content, announcing dates of exams, providing rich multimedia resources, and reinforcing group work which all contribute to developing their learning skills. It can be concluded from the results in this section that that adopting WhatsApp as a method of communication and teaching in the Iraqi students' learning environment especially during Covid-19 crisis can be applied as these students hold positive attitude towards using it.

6- WhatsApp Barriers from Iraqi Teachers' Perspective

The previous two parts of the questionnaire measured the Iraqi students' frequencies of using WhatsApp and their attitude towards using the application in their online learning process. In this last section, the respondents were asked to respond to 15 statements distributed over four sub-scales of barriers (a) skills (1 items), (b) equipment (3 items), (c) motivation (6 items), (d) cost (2 items), and technical (3 items). The purpose of these items was to determine the barriers or challenges that might hinder the use of WhatsApp as a method of learning process from the Iraqi students' perspectives. The same method of analysis of the previous part of the questionnaire was applied to this part using SPSS frequency tests and the measurement offered by Hanson et al. (2005) for agreement level was adopted. The following are the findings.

1- Skill Barriers

Having the skill to apply technology is a major factor to accept the adoption of a new technology (Davis, 1989; Schoepp, 2005). In the previous part, the Iraqi students reported that the use of WhatsApp is simple and easy to use as it does not require having special skill. This was due to its simple features and clear options. Besides, most of the students are familiar with this application as they use it in a daily basis for communication and social purposes before using it for educational purposes. For educational purposes, the use of this application needs the students to follow up their teachers' instructions and dates, the links to other websites, and the ability to download and upload study materials and tasks. In this part of the questionnaire, the students were asked to rate their level of agreement about

whether they lack for training might limit their use and, consequently, accept WhatsApp for learning purposes. As it is shown in Table 7, more than half of students (53.3%) expressed their disagreement on their need to receive any training to use WhatsApp in their learning process. This result reinforces the idea that the skill is not a barrier to using WhatsApp in Iraqi schools as it does not need a special skill.

Table (7) Skill barrier

#	Items	M	SD	%	Level of Agreement
32	Lack of training on using WhatsApp for educational purposes limits my use of it	2.66	0.808	53.3%	Low

2- Equipment Barrier

Although the students expressed less need to training or special skills to use WhatsApp in previous section, implementing WhatsApp as a method for learning requires providing students with the necessary tools or equipment. According to the analysis in this section (Table 8), around 82% of the Iraqi school students do not own personal smartphones required to use WhatsApp. It seems that the students use their parent's smartphones for this purpose. The problem is complicated when more than half of the students' families (55.8%) do not own a smartphone required to implement WhatsApp for learning. The most problematic issue that face the students is the internet connection. In response to the last item in this part of the questionnaire, around 83% of the students suffer from the interruption or lack of internet connection at their homes.

Table (8) Equipment barrier

#	Items	M	SD	%	Level of Agreement
33	I do not have my own smartphone required to use WhatsApp	4.10	0.744	81.9%	High
34	My family does not have smartphone required to use WhatsApp	2.79	1.312	55.8%	Moderate
35	There is a lack of Internet connection required to use WhatsApp at home.	4.14	0.829	82.9%	High

These results about the equipment needed to use WhatsApp indicates that the students severely suffer from the lack of devices and internet connection. The lack of these equipment definitely forms a major barrier that hinder the acceptance of WhatsApp as technology for education. Based on these results, it can be concluded that having the skill and positive attitude towards the use of WhatsApp is not enough to adopt the it in learning. Making

certain equipment, such as the devices and internet available for students can help the acceptance of WhatsApp as a method for learning online.

3- Motivation Barriers

Motivation can be a major factor in learning (Carlos, Iria, Mar, Carlos, & Carmen, 2017). Possessing higher motivation levels can help students to adopt to new technology in learning process (Davis, 1989). The purpose of this part in the questionnaire was to determine the level of the Iraqi students' motivation towards the use of WhatsApp in their learning. As it is shown in Table 9, the students highly think that WhatsApp is an appropriate platform to exchange course related information (93.7%). Meanwhile, the students moderately believe holding negative beliefs about using WhatsApp for learning and lacking the time to use WhatsApp for learning at 56% each. The students also expressed moderate attitude towards lacking the interest to use WhatsApp for learning (51.7%) and feeling unconfident at using WhatsApp for learning (51.3%). Finally, the students completely disagree (39.2%) that their families have negative attitude towards using social media applications by their children. Believing that WhatsApp is a suitable platform for learning, holding low negative beliefs about using the application, possessing enough self-confidence and interest to use it indicate the Iraqi students' personal readiness to adopt WhatsApp in their learning process.

Table (9) Motivation barrier

#	Items	M	SD	%	Level of Agreement
36	I hold negative beliefs about using WhatsApp for learning	2.80	0.852	56.0%	Moderate
37	I am not self-confident at using WhatsApp for learning	2.57	0.760	51.3%	Moderate
38	I lack the interest to use WhatsApp for learning	2.59	0.758	51.7%	Moderate
39	I think lack of the time available to me for study can limit my use of WhatsApp for learning	2.80	0.852	56.0%	Moderate
40	My family have negative attitude towards using social media applications by kids	1.96	0.723	39.2%	Low
41	I think WhatsApp is an appropriate platform to exchange course related information.	4.68	0.468	93.7%	High

4- Cost Barriers

The findings about the cost barrier (Table 10) showed that the majority of the Iraqi school students find accessing the Internet at home is very high (94%) and that the price of smartphones are also very high. These results indicate that the cost of the internet and the high price of the devices definitely hinder their use of the WhatsApp for learning. Having the internet free of charge and cutting the cost of smartphones for these students would encourage them to adopt WhatsApp a method for learning in Iraqi classroom.

Table (10) Cost barrier

#	Items	M	SD	%	Level of Agreement
42	The high cost of accessing the Internet at home limits my use of the WhatsApp	4.70	0.460	94.0%	High
43	The high price of smartphones limits my use of the WhatsApp	4.64	0.481	92.9%	High

5- Technical Barriers

The last barrier that is measured in the second section of the questionnaire was the technical barrier. In this section, the students were asked to rate the technical issues that might limit their adoption of WhatsApp in their learning. The findings (Table 11) showed that the most important problem the students face is related to the storage capacity of their phones (94.8%). Another technical problem reported by the students was the small size of the smartphone screen (82.9%). At a lesser frequency (76.2%), the students displayed a high concern about losing their messages in case their phones are damaged or lost. Once these issues are sorted out, using WhatsApp can succeed as a method for learning.

Table (11): Technical barrier

#	Items	M	SD	%	Level of Agreement
44	WhatsApp screen appear small in smartphones	4.14	0.829	82.9%	High
45	My smartphone storage capacity is small to download and save learning material	4.74	0.441	94.8%	High
46	It is difficult to recover messages in case my smartphone is damaged or lost	3.81	0.396	76.2%	High

In this section of the questionnaire, five aspects of barriers including the skill, equipment, motivation, cost, and technical barrier were examined from the Iraqi students' perspectives. The findings revealed that the students generally find themselves having the skill to use WhatsApp for learning. Besides, the students believe positively of the suitability of WhatsApp for learning. In addition, they appeared personally ready to use the application as they have high self-confidence and very strong belief of using the application. However, a number of issues were reported by the students, such as lacking of the devices and internet connection, high cost of the internet, high price of the devices, small sizes of the phones screens, limited storage capacity of their phones, and the fear of losing their messages in case their phones are damaged or lost. These barriers were seen by the Iraqi students limiting their acceptance and adoption of WhatsApp in their learning process. It can be concluded from the findings in this part of the study that unless these barriers were sorted out or overcome, the attempt of adopting WhatsApp in learning would be in vain as the students would not be ready to take WhatsApp as an important substitute of face-to-face interaction.

5- Contribution to the literature

This study examined the use of WhatsApp as a method of learning among Iraqi school students at the time of during the pandemic of Covid-19. It expands the growing body of knowledge about using technology and online applications as a compensation of face-to-face classroom interaction.

The findings in this study highlighted the students' attitude and their level of readiness to accept such a learning method, thus added to the literature concerning the ability of the program to substitute or at least compensate for the absence of face-to-face interaction. Besides, the findings in this study are important to the policy makers in Iraq to overcome the barriers that might limit the use of online social networks in educational settings. Figuring out these barriers from the students' views would encourage the schools to take serious steps and actions towards eliminating these barriers. This will also help activate the use of technology in Iraqi schools. Overall, the study identifies the important and unique role of WhatsApp in connecting students with their teachers online at the time of Covid-19, the mission which has become even impossible to attain to.

6- Conclusion

The present study attempted to draw the attention to the possibility of implementing social media in education during the Corona virus (Covid-19). It investigated the usability of WhatsApp from the Iraqi school students. The focus was on the students' attitude and readiness to adopt the application for their learning process and the barriers that might hinder such adoption. The findings showed that the Iraqi students positively accepting the application in their learning. The students generally prefer using the application and believe that the application is useful and easy to use. Nevertheless, the students expressed that for this application to succeed as a method of learning, a number of barriers must be controlled, such as affording smartphones with enough storage and bigger screens along with internet connection. Taking these practical actions would illuminate the students' fear and encourage them to adopt to the new technology. It is hoped in this study that the findings would urge the policy makers in the education system in Iraq to work hard to help students stay safe in their homes while receiving proper education.

References

- Annamalai, N. (2019). Using whatsapp to extend learning in a blended classroom environment. *Teaching English with Technology*, 19(1), 3-20.
- Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of computer-mediated communication*, 13(1), 210-230.
- Carlos, A., Iria, E., Mar, P., Carlos, D., & Carmen, F. (2017). Understanding Learners' Motivation and Learning Strategies in MOOCs. *International Review of Research in Open and Distributed Learning*, 18(3).
- Cetinkaya, L. (2017). The Impact of Whatsapp Use on Success in Education Process. *The International Review of Research in Open and Distributed Learning*, 18.
- Creswell, J. W. (2012). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (4 ed.). Boston, USA: Pearson Education.

- Damanik, E. S. D. (2020). Student Attitude Toward The Use of Whatsapp In EFL Class. *VISION*, 15(2).
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management science*, 35(8), 982-1003.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2011). *How to: Design and evaluate resecharch in education*. New York McGraw-Hill Humanities/Social Sciences/Languages.
- Hanson, W. E., Creswell, J. W., Clark, V. L. P., Petska, K. S., & Creswell, J. D. (2005). Mixed methods research designs in counseling psychology. *Journal of counseling psychology*, 52(2), 224.
- Hershkovitz, A., Elhija, M. A., & Zedan, D. (2019). WhatsApp Is the Message: Out-of-Class Communication, Student-Teacher Relationship, and Classroom Environment. *Journal of Information Technology Education*, 18.
- Mbukusa, N. R. (2018). Perceptions of Students' on the Use of WhatsApp in Teaching Methods of English as Second Language at the University of Namibia. *Journal of Curriculum and Teaching*, 7(2), 112-119.
- Schoepp, K. (2005). Barriers to technology integration in a technology-rich environment. *Learning and teaching in higher education: Gulf perspectives*, 2(1), 1-24.