

# THE ROLE OF WHATSAPP APPLICATION IN ENCOURAGING STUDENTS' SELF-EFFICACY OF USING BLACKBOARD SYSTEM: AN EXPLORATIVE INTERVIEW STUDY

<sup>1</sup>AYMAN N. ALKHALDI, <sup>2</sup>MOUEZ ALI, <sup>3</sup>SHAWKY MOHAMED MAHMOUD, <sup>4</sup>ZEYAD A. ALREFAI

<sup>1,4</sup>Management Information Systems Department, Community College, University of Ha'il-Saudi Arabia

<sup>2,3</sup>Computer Sciences Department, Community College, University of Ha'il-Saudi Arabia

E-mail: <sup>1</sup>a.alkhalid@uoh.edu.sa, <sup>2</sup>m.salahali@uoh.edu.sa, <sup>3</sup>sm.mahmoud@uoh.edu.sa,

<sup>4</sup>z.alrefai@uoh.edu.sa<sup>2</sup>xxx@abc.com

## ABSTRACT

This study aims to examine how students' social media use can play a role in encouraging their self-efficacy of using the blackboard system for learning purposes, considering their experience of using the blackboard system. This study argues that the mentioned positive role of social media in teaching and learning emerged as a govern social media platform for students. This avoids the negative effect of social media on them and provides a social media platform for assisting and guiding students. A qualitative method approach was used, using interviews conducted with 36 students. The semi-structured interviews were analyzed following the thematic content analysis method. The interviews were targeted at obtaining University of Ha'il students' opinions to confirm the challenges facing them concerning the usage of the Blackboard system. The findings show that most of the participants had positive beliefs toward the implementation of WhatsApp with Blackboard. Especially those students with little experience using the Blackboard system can improve their communication experience. We recommend future studies, finding theories to integrate the uses of social media in the education process. Next, researchers should also develop how WhatsApp can improve learning using Blackboard, especially for students with modest skills.

**Keywords:** *E-learning, Social Media, Self-efficacy, Blackboard*

## 1. INTRODUCTION

Learning styles have advanced quickly during the last decades. Traditional learning styles and learning approaches are impacted by technological development and in progress to disappear. Of late, there is a widespread growth in the social media network's usage global. According to the Global digital 2020 report<sup>1</sup>, "social media is changing the way people present ideas and information, interact, and judge the quality of content and contributions," and "almost 49% of the world population regularly use social media". Social media networks have begun to impact on personal and professional life. [1] found that over 70% of faculty members used social media networks in their private lives, 55% used social media in their professional life, and 41% made use of social media

as part of their teaching. Social media is a useful tool in the educational field because it significantly increases interaction between the teacher and learners and between learners. Social media helps to create a state of satisfaction and harmony between lecturers and students. It also provides improved sources of information via mobile devices and smartphones [2]. For the past few years, the University of Ha'il has been investigating faculty and students' use of technology in learning to highlights the opportunities they offer to students [3].

Learners use social media networks not to create content but to retrieve information and files. The interaction between users and members of the network community is the key to such networks' success. In this case, the purpose of creating social

<sup>1</sup> <https://www.slideshare.net/DataReportal>

media networks is for sharing and distributing academic information [4]. For instance, [4] identified that WhatsApp is the most common social media network among students in an educational department University in Turkey. This because WhatsApp because ease and quickness of distribution of information and the ability to share content. Ozturk found that support and sharing educational content on WhatsApp can positively affect academic results.

[5] added that social networking is an important technology that can support teaching methods, such as cooperative learning, problem-based learning, and reflected (combined) learning. Besides, it enhances the participatory learning environment among learners by facilitating dialogues and contributing to the learning community's development. [6] observed that today's dominant culture is participatory in education, and it this best done through social networks via the internet. People exchange information about what they did through photos, videos, and texts in their profiles and the ability to track other people's reactions to them. In this sense, the sphere of influence that social networks have makes their use attractive.

Based on the above, social media is characterized by several features in E-learning that has been mentioned in some research and studies as asserted by [7]. This has been supported by [8], who reviewed embedding the social features into E-learning system and concluded that limited studies have encouraged the benefits of social features as a vital factor of E-learning; such features were not explored sufficiently. [8] have utilized social support theory, arguing that embedding the social features into E-learning system is essential. We believe that social media has an influential role in the guidance and educational process in general and e-learning. Learning occurs when developing a network, that is, when creating new connections, new ideas, data, and information can be viewed as nodes.

The authors believed that the success of E-learning adoption can be, only if significant engagement learners occurred. Attaining adoption of E-learning systems by learners is a serious challenge and can be affected by various variables. One of such factors is user's self-efficacy. Previous studies have argued that with a self-directed E-learning environment, self-efficacy can be considered a key component of academic success in E-learning. Though it was confirmed that social networking is an important technology that can support teaching. The how of self-efficiency can influence social networks'

use of e-learning is still unknown. Considering that self-efficacy was found to have a significant impact on students' academic success. Learners' self-efficacy affects individual learning success online, it is believed that positive interventions made in students' perceptions of E-learning will contribute to their success. To fill this gap, further research is needed to provide a guide of learners' self-efficiency should be considered in the design of E-learning environments to increase their engagement.

This study is unique as social media is merging with popular media. This study is vital to the education sector, especially to policy-makers and developers in the universities, since its findings could conclude that social media can become a part of the students' assistant and guidance. This study could help the academia in enhancing the quality of learning, possibly by delivering customized lectures and assignments through social media platforms. It would also avail as a reference material to other researchers who might wish to embark on studies of similar nature.

This study contributes because its findings could be used as a basis for creating a new conceptual model that synthesizes the use of the Blackboard system for learning along with social media. This study provided useful insights into how the use of new social media can play a role in promoting user's self-efficacy. The findings obtained focused holistically on user self-efficacy as antecedents of the Blackboard system for learning. This study highlighted the importance of differentiating the extent of measuring users' self-efficacy in adopting the Blackboard system supported by social media such as WhatsApp. Moreover, the findings of this study can synthesize new social media systems and add more control variables into the equation in different developing countries. Ultimately, this study provides a guide to further research into the design of E-learning environments to increase student engagement.

This study aims to examine how students' social media use can play a role in encouraging their self-efficacy of using the blackboard system for learning purposes, considering their experience of using the blackboard system.

## 2. LITERATURE REVIEW

In early research, [9] proposed items of competency like education, knowledge, attitude, and the ability to use an online education system. [10] proposes a framework for evaluating competency in an IT user context. This framework addresses competency for the IT user Domain. Based on social

cognitive theory, this study also introduces a general framework for IS user competency. They asserted the need to identify factors (e.g., IS self-efficiency) associated with IS user competency. Eschenbrenner and Nah, showed how to develop IS user competency based on the following: i) mastering user self-confidence; ii) ability to engage in enactive learning; and iii) use the system pre-determinate scripts and procedures. This approach displays that user competency can be developed by the mutual interactions between all IS user interactivity components. [11] studied the human factors considered in mobile learning management systems (MLMS). [11] stated that previous studies saw human factors as knowledge about abilities, human limitations, and other human characteristics associated with the development of IS. These factors are the key to generating the success, or the failure of any IS deployment.

Similarly, [12] extended the IS success model for the e-assessment (e-learning) system. They categorized the factors studied into four categories. One such is the examinee (i.e., users) category, which includes user computer experience, computer self-efficacy, and computer anxiety. Such a category is related to the user's ability to use the system.

A recent study by [13] stated that E-learning services could be modified by considering the students' requirements, knowledge, competency, and experience. [13] argued why students prefer an E-learning system that could include their perceptions of their skills and their capacity to be engaged in independent learning. [14] showed that the best predictor of students' perceived ease of use of E-learning is experience. [15] examined students' use of E-learning systems by digital learners. [15] focused on those users who have higher levels of computer literacy and experience. [12] identified the factors determining the users' satisfaction with the e-assessment educational system following the qualitative method (interviews). They found that the user's computer experience was one of the significant factors. They highlighted the importance of the qualitative method in addressing such issues by criticizing that most previous studies have studied these factors quantitatively. This emerging the importance of considering the student's self-efficiency of using the E-learning system according to their experience of using such a system. [12] supported this, who noted that the ISS model shows a lack in users' computer self-efficacy. Therefore, they extended the ISS model with the factor, namely,

computer self-efficacy of the e-learning system (i.e., e-assessment) experience.

### 3. SOCIAL MEDIA UTILIZATION IN SAUDI ARABIA UNIVERSITIES

[1] concluded that social media have a direct impact on higher learning. According to the Digital 2019 Saudi Arabia report [16], social media use recurrence in Saudi Arabia. In the report of 2015 naming the additional review survey results: YouTube (73%), WhatsApp (72%); Facebook (63%); Instagram (60%); Twitter (56%); and Snapchat (43%). [17] indicate that social networking applications are widespread among major universities in the Kingdom of Saudi Arabia. Also, social networking applications' potential as robust collaboration and educational tools appears to remain untapped by students, which hinder the effectiveness.

Several studies were reported results about the use of social media in education in Arab and Arab Gulf countries. For instance, [18] reported that Facebook could be used as the best teaching environment, supporting students' academic performance and appointment. [19] found that using Facebook as a learning social media positively impacted students' performance in Bahrain.

Several works display a positive impact of using social media networks on students' performance (e.g., [20]; [21]). In early research works in Saudi Arabia, [22] found that using social media networks develops the students' achievements, abilities and aptitudes. [23] reported that the widespread usage of social media networks in Saudi Arabia universities, has enabled students to undertake various learning activities such as building communities, cooperating with other students, and knowledge. [24] stated that social media are more frequently used than Learning Management System (LMS) in Saudi Arabia universities for certain activities, like students' communication. Contrariwise, LMS is more used than social media networks for submitting homework and projects. He adds that Universities' web provider gives the opportunities to students to explore a variety of types of social media, such as Facebook, Twitter, Instagram, Snap chat, MySpace, etc. In [24], the author show that Twitter has the highest response (85.6%), it's the social media most used in Saudi universities to deliver learning resources. However, this research recommends that faculty members use a variety of social media kinds that permit them to deliver knowledge resources easily and quickly. At

the same, the most frequently used social media in Saudi Arabia universities are Facebook and Twitter [25]. Others social media like YouTube, and LinkedIn are used by students at King Fahd University of Petroleum and Minerals (KFUPM) [25].

A study by [3] have surveyed computer science college students at University of Ha'il to address the use of social media networks in learning and its impact on students' academic skills. They reported that more than 90% of students use social media networks in learning. Most of them use YouTube and WhatsApp. WhatsApp is the most used for diffusing information, is efficient even for lecturers since it is easy and accessible anywhere and anytime.

A recent work conducted by [26], showed that social media network has a significant positive effect on interactions with colleagues, interactions with instructors, engagement, cooperative learning, and student performance. Using social can make easy communication between students and instructors, which indicates an improvement of collaboration, knowledge sharing, and development of the learning course. Another study has surveyed over 500 students at King Abdul-Aziz University [27] to establish a positive attitude towards using social media in teaching. The most frequent tool used by students is WhatsApp. WhatsApp has a positive effect when used to support writing skill enhancement. Similarly, [28] explored the role of social network usage among Saudi nursing students at Ha'il University. The study results show that most students use WhatsApp, followed by Twitter and Snap Chat.

According to [29], the study's findings show that most students informed that WhatsApp is easy to use, and WhatsApp has become the de-facto platform chosen by students for both learning organization and data diffusion. Compared to other existing tools, the user preferred WhatsApp over the Blackboard learning system and e-mail. This might be due to the ease of using a trivial, always-on mobile application over a platform-based login system [29]. Nevertheless, in [30], the authors show that Twitter is the most common, followed by Facebook, Instagram, and other social media, e.g., LinkedIn and path. Furthermore, the hypothesis "The increase in the use of social networks decreases the students' academic performance" is not satisfied by the findings of this study.

[31] highlighted that faculty members from various fields use Twitter for several teaching

activities. They share resources, post important information, and enable students to ask questions [31] concluded that the use of Twitter is a positive experience focused on the accessibility of the platform and engaging students in learning and permitting sharing opinions and ideas. In resume, all previous studies have underlined that social media networks in educational settings have produced a variety of positive effects.

In conclusion, all previous studies have underlined that social media networks in e-learning have produced a variety of positive effects like student's performance and achievement through sharing knowledge and resources. Social media facilitates the communication between students and lecturers and helps lecturers give feedback about course and material. Table 1 summarizes the positive influence of social media based on some research works in Saudi Arabia. On the other hand, little research has highlighted the factors that influence social networks' use of e-learning. Besides, depends on the above, most of the past studies on social media utilization in Saudi Arabia universities have confirmed that WhatsApp is the most used social media among students, including the University of Ha'il, as stated by [3, 28]. Therefore, as this study focuses on the University of Ha'il, WhatsApp is considered for further exploration.

Besides the positive role of social media in teaching and learning, social media has various adverse effects. For instance, [32] showed that the social media message's content coined the term 'information thinness' and mean the lack of information or unimportant information in messages. The result of a survey of the content of messages sent by over 700 people in Saudi Arabia. [32] found that 'Users may overuse technology merely to communicate for the sake of communication, with no interest in actually being informed by anything, thus suffering from information thinness.' In the study conducted by [31], the author shows that the negative experiences of using Twitter expressed by faculty members covered several points: the confusing nature of tweeting, confidentiality, the nominal size of tweets, and time supervision. In [33], the author found some negative features of social media like Spending more time on communication and fake news. A study by [34], who exploited a sample of 384 students, shows that Facebook negatively influences student academic performance.

Table 1: Related works reported the positive impact of social media in universities in Saudi Arabia

Research work conducted by	Using	Factors
[3]	Survey students at Hail university	Students' academic skills
[22]	Survey	Students' achievements, abilities and aptitudes.
[23]	Discussion	Building communities, cooperating with other students, and knowledge
[24]	Survey students from the two selected universities in Saudi Arabia	Students' communication
[25]	Survey	Usage
[26]	Survey from KFUPM in Dhahran region in Saudi Arabia	Interactions with colleagues and instructors, engagement, cooperative learning, and student performance
[27]	Survey Saudi Arabia	Support writing skill enhancement
[28]	Survey Hail university	Usage and study habits
[29]	Survey students at Qassim University in KSA	Student behavior
[33]	Survey	Students' achievements, abilities and aptitudes.

[23] also listed the reasons and barriers to why some Saudi Arabia universities are hesitant to adopt them. For example, particular lecturers believe in the effectiveness of learning in a traditional classroom; confidentiality is the main apprehension of most faculties; and potential. Potential private information on the internet will give an occasion to

give hackers personal data. Also, as clarified by [35], miscommunication, where social media does not afford the same opportunities of clarification and interpretation that happen in personal communication; and loss, control is another barrier that hinders learning in support social of media utilizing blogs [36]. This study argues that the above mentioned positive role of social media in teaching and learning emerged as a govern social media platform for students. This avoids the negative effect of social media on them and provides a social media platform for assisting and guiding students.

#### 4. RESEARCH METHOD

The current study used a qualitative research method approach to structure the research design of the current study. Such a method approach aims to improve the quality of the concluding findings and understand analyses [37]. The qualitative method seeks to analyze and describe phenomena to catch new and get more information, which helps explore new theoretical insights [38, 39].

A qualitative approach is associated with data in the forms of perceptions, beliefs, opinions, or difficulties exposed using the quantitative approach. A qualitative approach was used to collect data (i.e., interviews, observations, focus groups, and document analysis). One of such effective methods in information systems research is the interviews [39]. In-depth interviews help explore respondents' experiences intensely [40] by allowing them to state their perceptions with their expressions and words about the subject under study with no limitations [41]. Ethical clearance for our study was granted by the University of Ha'il scientific, ethical committee. Therefore, to confirm the predictive factors in the research model conducted by [42], a qualitative method approach was used, using interviews conducted with students. The respondents have interviewed to confirm the challenges facing them. The interview question depended on hypothesizing formulated based on the related literature review.

The interviews were targeted at obtaining student's opinions concerning the usage of the blackboard system. The interview topics and questions were selected based on their knowledge or expertise [43]. The interview sample size depends on saturation, where there is no further knowledge to be collected [44]. The required sample study evaluates the research model validity developed by [42]. The interview questions were pre-tested with three University of Ha'il students who have less than one year of experience using LMS. The interview is semi-structured, consists of questions in the forms of

open-ended and close-ended questions. Three closed-ended questions were aimed to collect demographic information about respondents (i.e., gender, major, and experience in using the blackboard system). The last is associated with the predictive factors that are already identified in the developed research model. Six open-ended questions were also intended to discover how such predictive factors can play a role in Blackboard system adoption.

#### 4.1 The Sample of the Study

A purposive sampling technique was employed to conduct interviews with at least 12 students from the various colleges at the University of Ha'il. The interviewees should be distributed all genders, majors, and all with no or low experience using the blackboard system. According to [44], they suggested that the sample between 6 and 12 for interviews will be adequate if this selected group is homogeneous to achieve and understand the research's objectives. A number of 24 of interviewees were interviewed.

#### 4.2 Data collection method

The students' in-depth interviews were conducted through phone calls and Zoom Application and with one by one interviewee to ensure the privacy and frankness of the recorded responses; conducted from September 2020 to October 2020; 15 to 25 minutes were allotted to each researcher to enable him/her to respond to the in-depth interview questions. Interview questions are:

- Based on your recent experience, can WhatsApp help the Blackboard system to enhance the learning process? How?
- Explain how WhatsApp can build a students' awareness of how to interact with their peers and instructors via the Blackboard system?
- Explain how WhatsApp is useful in sharing guidelines on how students can access their learning and educational resources via the Blackboard system?
- Explain how WhatsApp can encourage the students' capability to achieve their assignments and exams through the Blackboard system individually and efficiently?
- Explain how WhatsApp can help students to improve their low experience in using the Blackboard system?
- Explain how WhatsApp can make it easy to support students' experience of using the Blackboard system?

#### 4.3 Data Analysis

The semi-structured interviews (qualitative data) that were collected were then analyzed following the thematic content analysis method. The purposes of utilizing such an analysis method are identifying recurrent or common themes in the data and designating the main elements of participants' explanations. The researchers have performed the data analysis by following the six steps specified by [45]. These steps are: researchers were read the interview scripts several times to familiarize themselves with the data. Based on this preliminary review, the researchers produced a list of consistent codes with the interpretive approach and data-driven. The researchers considered how codes combined should be considered to form over-arching themes. Then, the researchers have reviewed these themes to ensure they were correctly reflected in the data set. Ultimately, the researchers were identified and labeled the themes with names and revealed how best to report them [45].

#### 4.4 Reliability and Validity of Instrument for Qualitative Approach

This study employed [46] recommendations to ensure reliability and validity in qualitative research. First, select a purposive sample of students following the criteria defined in the study to choose appropriate and adequate participants. They were also conducting pilot interviews to ensure that questions made sense to participants as the Arabic language is the native language. The formulated interview questions were translated into the Arabic language by a trustworthy translation company and refereed by three experts to validate the instrument. Next, based on their comments, suggestions, instructions, the interview questions have been modified. Besides, the back translation method was performed as the required method in academic translation, where the same translation company has translated the Arabic interview questions back to the English version. This to provide further quality verification, whether the translated interview questions are cover all sides of the original instrument [47]. Lastly, the researchers compared the two English interview questions to inspect for any possible mistranslations or inconsistencies. As a result, the researchers confirm that the two versions were identical, and the interview questions the Arabic version is efficient and its translation process within a quality level. Furthermore, a technique of targeted interviewee respondents' validation check was utilized by researchers to improve the validity of a study [48].

## 4.5 Results of Analysis

### 4.5.1 Respondents' Demographic Profile

The interviewee students' experience using the m-blackboard system comprises ten no experienced interviewee students, eight low experienced interviewee students (less than one year), and 18 medium experienced interviewee students (1 to 3 years). The majority (24) of interviewees are males, the rest (12) are females. The interviewee students sample was distributed from various colleges, majors such as scientific, social, and humanities, natural, and medical sciences at the University of Ha'il. The following is the analysis of qualitative questions in the interviews conducted:

### 4.5.2 WhatsApp can help the Blackboard system to enhance the learning process

Students expressed their view that the presence of WhatsApp could enhance the learning process. This could be through its ability to send alerts for them about quizzes and lectures and the deadline of assignments, ease of communication with lecturers and peers, and the ability to share clips about using the Blackboard system. One student viewpoint was, "Communicating with my colleagues - Knowing the duties and their time - Announcements for tests - Using it as compensation for blackboard announcements." Another one commented that "The WhatsApp system remains a link between students and the doctor because many students do not permanently enter the blackboard." He or she added that "so WhatsApp works to compensate for the gap in that by alerting students in case there is a cone or duty and solving problems that occur on the blackboard."

### 4.5.3 WhatsApp can build a student's awareness of interacting with their peers and instructors via the Blackboard system

Students believe that WhatsApp can build their awareness of interacting with their peers and instructors via the Blackboard system. They confirmed that WhatsApp offers ease of discussion and interaction platform with lecturers and other students regarding Blackboard systems' problems and the obstacles students face. The instant chatting about how to do with the material uploaded on Blackboards such as lessons, assignments, and exams. One student viewpoint was, "WhatsApp is the first application that is commonly used by all students because it makes the process of communication easier between us, where interactions between students are benefit able to discuss on how to use, load, download materials."

Another one commented that "creating a group on WhatsApp facilitates the process of transferring experiences and what students face while working through the Blackboard system." Another student added that "WhatsApp offers an immediate communication platform with the course lecturers for counseling through instant chatting about academic tasks."

### 4.5.4 WhatsApp is useful in sharing guidelines on how students can access their learning and educational resources via the Blackboard system

Students confirm that WhatsApp is a useful tool in sharing guidelines on how students can access their learning and educational resources via the Blackboard system. Students explained that WhatsApp effectively shares text, photos, videos, tutorials, links, and scientific documents for guiding students to use the Blackboard system for material and assignments. One of the students said, "Transferring pictures, videos and other information that students could not understand in the blackboard system." Another student explained that "it is easy to share content through sending links on WhatsApp; also enabling share educational documents themselves."

### 4.5.5 WhatsApp can encourage the students' capability to achieve their assignments and exams through the Blackboard system

Students expressed their view that WhatsApp could encourage their 'abilities to complete their tasks and exams via the Blackboard system individually and effectively. This could be through its ability to recall and remind them about their tasks and educational material existence on the Blackboard system. A student said that "Reminders about deadlines for exams and assignments are useful for us to complete our tasks via the blackboard system on time." Another student asserted that "Mostly when I open my WhatsApp If I find an advertisement for an assignment, I do lunch an instant chat about the tasks and get an explanation about the required assignments. Finally, this leads me to do the assignment".

### 4.5.6 WhatsApp can help students to improve their low experience in using the Blackboard system

Students believe that WhatsApp can improve their low experience in using the Blackboard system. A student explained that "Sharing videos for explanation about the use of the Blackboard system, especially new registered students; and communicating with experts' students

of using the Blackboard system on how to use the Blackboard. Another student stated that "When I am having a problem using the Blackboard system, I usually ask the students and lecturers via WhatsApp, and sometimes there is an immediate answer.

#### **4.5.7 WhatsApp can make it easy to support students' experience of using the Blackboard system**

Students confirm that WhatsApp is a tool to make it easy to support students' experience of using the Blackboard system. A student explained that "Create collaborative work contents and transfer expertise on problem-solving." Another student explained that "Due to the large number of problems facing students in Blackboard, they dispense the Blackboard system and go to WhatsApp for the easy matter. A student asserted that "WhatsApp can be used to facilitate access to the lecture remotely, as well as, following up the academic performance."

### **5. DISCUSSION**

The establishment of social media (including WhatsApp) comes quickly into the way of the education sector. WhatsApp offers students with new possibilities. They to be encouraged to use e-learning systems, such as Blackboard. Also, they can become self-regulated in their learning. WhatsApp persuades a wide variety of communicative capabilities. This study indicated that students accept WhatsApp at the University of Ha'il for effective communication, which increases their capability to be engagement in the Blackboard system as there are diverse ways to employ social media tools for attaining educational purposes. One approach is to integrate social media tools into the e-learning system as a learning source that assists in task completion via the system itself.

The overall view expressed by students declared their positive beliefs of how WhatsApp can play a significant role in encouraging students' self-efficacy of using the Blackboard system. This study demonstrated that WhatsApp is advancing students drive at an incredible quickness in the educational sector in the University of Ha'il in Saudi Arabia. This study confirmed that students, for being Blackboard users, need an easy, fast, and common social media connection tool with each other and with their lecturers. WhatsApp provides incredible opportunities for sharing knowledge, ideas, and experiences regarding the usefulness of using the Blackboard system. This can inhibit the challenges facing low experts' students in using the Blackboard system.

According to the interviewees' responses, it can be concluded that most of the participants had positive beliefs toward the implementation of WhatsApp with Blackboard. Therefore, what lecturers believe about implementing WhatsApp in their learning is more robust than what they adopt in their instructions. There is consistency between the findings of this study and what the literature reported; this supports this study's results.

This finding is consistent with most research works (i.e., [18, 19, 24, and 26]). Those studies confirmed that social networks help students take their courses online by supporting students' interactions with colleagues, instructors, engagement, and cooperative learning. According to these related works, students agreed that social networks' integration to the course helped build a sense of community. Likewise, social media networks' ranking varies in terms of usage rates from a university to another, college to another.

In the context of our study, WhatsApp is a useful social network used by students during e-learning. This is providing a reason what previous research studies have reported that WhatsApp is the most used social network by students during distance learning, particularly in studies (e.g., [3, 27, 28] and [29], scoped Saudi Arabian Universities. Our study discovered reasonable findings reported by [3] that WhatsApp is the most used for diffusing information and added that WhatsApp provides incredible opportunities for sharing knowledge, ideas, and experiences with students show weakness in using and awareness the blackboard system. Thus, our findings are consistent with the result given by [3]. They reported that the social network has a positive impact on students' academic skills in the University of Ha'il. We argue that one of such students' academic skills are skills of using and awareness of LMS.

Our study's findings were in agreement with those of the study conducted by [26], who asserted that social media network has a significant positive effect on student performance in KFUPM in Saudi Arabia. Moreover, [27] shows that WhatsApp was also found to have a positive effect when used to support writing skill enhancement in King Abdul Aziz University in Saudi Arabia. This proposal is entirely consistent with the results of our study. The current study found that students accept WhatsApp for effective communication, which increases their capability to be engagement in LMS. This proposition is consistent with the findings reported by [31], that using Twitter is a positive experience



focused on the accessibility of the LMS and engaging students in learning.

Overall, we confirmed the importance of integrating social media, particularly WhatsApp, with an e-learning management system. We show that social media acceptance as an alternative to students' e-learning system speeds up the learning process and enables them to manage learning resources speedily and improve communication with lecturer. Also, Students with little experience using the Blackboard system can improve their communication experience. Share content with teachers by referring to social media.

## 6. CONCLUSION AND LIMITATIONS

The communication tools, such as social media, are more precise in the education sector than ever before, and it is developing quickly. Utilizing the Blackboard system for learning can be challenging to students while using social media tools to solve such challenges. Still, students can become a consulting source for being skillful and aware of such tools. The future innovative technology and integration with learning should highlight what students use instead of what the Universities wish them to use. Once students become instantly supported by their learning and their skills of using Blackboard, learning will be simplified through the efficient cooperation between lecturers and students.

The findings of this study show the achievement of its research objectives. This study confirmed the significant meaning of integrating WhatsApp, with an e-learning management system. This study confirms that social media (i.e, WhatsApp) acceptance could be an alternative to students' e-learning system speeds up the learning process. This study confirms that WhatsApp is a powerful tool for students for managing learning resources, facilitate communication with each other and with their lecturers.

Depends on the interviewee students' responses, the full view expressed revealed their positive beliefs about how WhatsApp can play a vital role in encouraging students' hard work in using the Blackboard system. The study showed that WhatsApp is advancing students to drive with shocks in the learning process at Ha'il University in Saudi Arabia. The study confirmed that students, being Blackboard users, needed a simple, fast, and standard social media communication tool with their instructors. WhatsApp offers opportunities to share information, knowledge, ideas, and experiences regarding the use of the Blackboard system. This

could prevent the challenges facing low-level students from using the Blackboard system. Based on the students' responses of the interviewees, we can conclude that the majority of participants had positive beliefs regarding the use of WhatsApp via the Blackboard system.

This study contributes by enrich the literature review in the field of E-learning. This study discovers how students' social media use can play a role in encouraging their self-efficacy of using the Blackboard system for learning purposes. This study considered the learner's experience of using the Blackboard system. This study found that students believe that WhatsApp can improve their low experience in using the Blackboard system; WhatsApp is a tool to make it easy to support students' experience of using the Blackboard system.

This study scope was limited to one university, the University of Ha'il, while many universities are in the higher education sector. Therefore, the results cannot be generalized. We could not support or reject the results conducted by [24] that social media are more frequently used in communication among Saudi Universities. However, [24] shows that Twitter has the highest response of users to deliver learning resources. Several studies (e.g., [3, 18, 19, 25, 30]), stated that Facebook and Twitter are the best networks used by students. Their findings do not coincide with [24], and the results we based on [3], [28] about the University of Ha'il that considered WhatsApp is the most used social network in the e-learning process. This emerging the importance of studying Twitter from the same perspective of our study in different Saudi Universities.

Since the self-efficiency variable succeeded in play a role in learners' adoption of WhatsApp for E-learning using the Blackboard system, future researchers are advised to examine other factors, such as users' self-confidence and system user competency).

The population sample was selected interviewee learners were of all genders, and majors, as reported by [3], who have surveyed computer science college students at the University of Ha'il using the blackboard system. This may reflect unbalanced findings especially in Saudi Arabia, where gender is an influential covariate. The sample size of the interviews (24 of interviewers) may not be adequate to achieve the research's objectives. This study explores the adoption of the Blackboard system in general with no focus on a specific part of the Blackboard system. Thus, it may be fruitful to

investigate the adoption of specific parts of the Blackboard such as Blackboard discussion, or Blackboard examination.

This study focused on LMSs, and only the features of one LMS (Blackboard) did not investigate any other E-learning tool. The interviews were coded and categorized by the researchers. The results might be affected by the interpretations of the researchers. However, to reduce such an effect, another academic researcher reviewed several coded transcripts. Further, the researcher conducted a secondary coding round by reviewing the whole coding process one month after the first coding phase.

We recommend future studies, finding theories to integrate the uses of social media in the education process. Next, researchers should also develop how WhatsApp can improve learning using Blackboard, especially for students with modest skills using it. Next, researchers are to develop a methodology to integrate social media content with the E-learning system, thus, enabling students to enjoy a self-learning environment. This environment includes what is formal like a lecture, labs, and informal like notifications, discussions.

#### ACKNOWLEDGEMENT

This Research has been funded by Scientific Research Deanship at University of Ha'il, Saudi Arabia, through project number RG-191341.

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