

Impact of Using WhatsApp and Facebook on Learners' Performance in ESP Contexts at Private Yemeni Universities

Naseem Ali Al-Wazeer¹ & Abdulhameed Ashuja'a²

¹ English Department, Yemen Academy for Graduate Studies, Yemen

² Faculty of Languages, Sana'a University, Yemen

Correspondence: Naseem Ali Al-Wazeer, English Department, Yemen Academy for Graduate Studies, Yemen. E-mail: phoenix_2020@yahoo.com

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Abstract

The present study aimed at exploring the extent to which WhatsApp (WA) and Facebook (FB) are used in ESP (English for Specific Purposes) contexts and their impact on ESP students' learning performance. To achieve this objective, two questionnaires and a semi-structured interview were developed. Due to Covid-19 restrictions, the questionnaires were administered online to a sample of 13 ESP male and female teachers and 406 ESP male and female students from eight Private Yemeni universities in Amanat Al Asimah and from four disciplines: engineering, computing and information technology, business, and medicine. The interviews with the teachers were also conducted via phone due to the restrictions imposed because of Covid-19. While SPSS was used to analyse the quantitative data, thematic analysis was used to analyse the qualitative data. The results of the study revealed that teachers' use and students' use of WA and FB in ESP contexts was moderate. The impact of WA and FB on students' learning performance was moderate from teachers' perspective while it was high from students' perspective. There was also a strong correlation between using WA and FB in ESP contexts and their impact on students' learning performance. The study recommended that universities train their teachers to use these applications and add a requirement course focusing on using technology tools for teaching and learning English language.

Keywords: extent, WhatsApp, Facebook, ESP contexts, impact, learning performance

1. Introduction

1.1 General Background

There is no doubt that technological revolution has radically altered modern life. "The world witnesses a technological revolution which everything demands change in all the life aspects" (Khalaf, 2017, p. 229). People living in this demanding era are fully aware that the use of technology obviates the need for consuming more time and energy to achieve any task. Modern life is strongly bounded to the online world resulting in the presence of digitalization in all aspects of life: social, educational, vocational, financial and even in the field of entertainment. Moreover, it is undeniable that information and communication technology (ICT) has a significant impact on peoples' life and the way they communicate. New devices such as computers, tablets, and smart phones have replaced the traditional ways of communication and eased the quick diffusion of information among people. ICT has also become an essential tool in education, as teachers started to give it a pivotal concern in EFL, ESL and ESP teaching and learning.

Among all those tools supported by ICT, social media seem to be the most promising owing to two reasons. First, the recent popularity of social media paves the way to be used for educational purposes. By which is meant, social media applications are widely used nowadays by a substantial number of people to socialise which enhances the opportunity for using them to teach ESP terminologies. Second, the flexibility of using social media applications can facilitate the process of both teaching and learning ESP terminologies. The majority of people possess smart phones which have become mobile computers that can be easily used anytime and anywhere. This privilege, the easy access to the online world, would encourage more ESP teachers and students to use social media for teaching and learning.

1.2 Statement of the Problem

With the growing demand for successful and effective integration of ICT in English language teaching and learning, a number of studies investigated the impact of using social media as a tool for English language teaching and learning. However, generalising their results has seemed to be far-fetched. Most of these studies were conducted in EFL contexts and about the impact of only one social media application. In regard to ESP contexts, little research has been carried out with a small number of sample to explore the impact of WA or FB on students' English learning. In a study conducted by Ayunigtyas (2018), only 10 business students participated in the study that explored the impact of WA and in Ghani's study (2015), only 35 engineering students participated in the study that was carried out to investigate the impact of FB. In addition, despite the popularity of WA and FB applications in Yemen, little research has been conducted to investigate their impact when used as tools to teach and learn English language. Therefore, more research needs to be done in Yemeni context.

1.3 Questions of the Study

This study aims at answering the following questions:

1. To what extent do teachers and students use WhatsApp and Facebook applications in the process of teaching and learning in ESP contexts at private Yemeni universities in Amanat Al Asimah?
2. To What extent do demographic factors affect teachers' use of WhatsApp and Facebook in ESP contexts?
3. To what extent does the use of WhatsApp and Facebook applications in ESP contexts impact students' learning performance from teachers' perspectives?
4. To what extent does the use of WhatsApp and Facebook applications in ESP contexts impact students' learning performance from students' perspectives?
5. Is there a statistically significant correlation between the extent of using WhatsApp and Facebook in ESP contexts and their impact on students' learning performance?
6. To what extent do demographic factors affect the correlation between the extent of using WhatsApp and Facebook in ESP contexts and their impact on students' learning performance?

1.4 Significance of the Study

This study provides research on a population that has previously not received sufficient focus. It is an attempt to investigate how far ESP teachers and students use WA and FB in the teaching and learning process. In addition, the findings of this study will contribute to the growing body of literature available on using WA and FB as a part of blended learning tools to teach and learn ESP at a university level. It gauges the perspectives of teachers teaching ESP for different applied sciences disciplines and educational levels in addition to the perspectives of a large number of ESP students from different applied sciences disciplines and educational levels on the impact of using these two social media applications on ESP students' learning performance.

2. Literature Review

2.1 Theoretical Background

A substantial number of linguists have indicated that teaching ESP is not confined to a specific method. Hutchinson and Waters (1987) are a good example. Another example is Prabhu (1990) who has explained that there is flexibility in choosing a method to teach ESP as this relies on some factors such as teachers, students, needs analysis etc.; any method can be chosen to be used in ESP classroom. That is to say, ESP concentrates on language in context with authentic tasks, which are related to students' future professional needs. Authentic tasks demand students' interaction and language learning in real life situations. Students are motivated to develop competencies that will be necessary to achieve their learning goal (Zivkovic, 2016). "ESP methodology is based on the fundamental principle that we can identify a set of core language needs of target learners and adopt teaching materials and practices that will facilitate learners to meet those needs" (Bhatia, et al., 2011, p. 3). According to Dudley-Evans and St. John (1998), what strengthens any teaching method is its ability to integrate language with the studied topics.

When it comes to integrating teachings theories into teaching ESP, those theories advocating interaction among students themselves and with their teachers can be of great importance. This can be exemplified by Stephan Krashen's theory. "According to Krashen, acquisition requires meaningful interaction in the target language - natural communication - in which speakers are concerned not with the form of their utterances but with the messages they are conveying and understanding" (Liu, 2015, p.142). Another theory is Gardner's multiple theory that appeared in Howard Garder's book 'Frames of Mind' in 1983 and strongly affected second language teaching.

According to Gardner (1983), there is one type of intelligence that depends on effective person-to-person communication. Vygotsky (1978) has demonstrated that interaction in a good environment is crucial to ensure learning English more effectively. Here comes the role played by digital communication in facilitating the process of teaching and learning English. Not only were computers used in teaching and learning English but there were also other technological devices.

2.2 Previous Studies

When the Internet came into existence, it was a revolution in information technology due to facilitating the process of obtaining much information about a substantial number of topics with a click. Web 2.0 offered web users and sites the opportunity to interact easily. Such a feature was the birth of social media. Hoesein's study (2018) indicated that the teachers participated in the study had positive perspective to the use of Web technology as it created a sense of community.

Many studies have shed light on the merits of using social media for teaching and learning English. Rashid and Rahman (2014) indicated that one of the benefits reaped from utilising platforms of informal communication as tools for teaching and learning English has been represented in the informal form of communication that has been enjoyed by students in social network sites (SNSs) such as FB and Twitter. "Each SNS has its purpose and focus, FB, for example, is well known for social interaction and information sharing" (Al-Jabri et al., 2015). They believed that it has enhanced students' chance of learning more interactively and sharing information more quickly. Another benefit has been highlighted by Bateman (2008) who has stressed the significance of discussion while learning in social media due to their role in improving students' critical thinking. Jin (2013) has drawn the attention to a third benefit. He has demonstrated that by sending sources to one another, learners have appreciated the essence of collaboration to learn. One more advantage of using social media for English teaching and learning has been that "social media assist in capitalizing on the possibilities for student-and-teacher generated content" (Bull & Hammond, 2008, p. 351). Consequently, according to Barnes (2017), more and more students showed interest in utilising social media to be an essential part of their teaching tools.

Regarding the use of WA and FB as EFL teaching and learning tools, researchers had different opinions. While some researchers (Alenazi, 2018; Bouhnik & Doshen, 2014; Chiroma, 2016; Mbukusa, 2018; Rodliyah, 2016; Yeboah & Ewur, 2014) maintained that these social media applications were not feasible, other researchers (Ajid et al., 2018; Alqasham, 2018; Asraf & Supian, 2017; Blair, 2014; Bouhnik & Doshen, 2014; Chariat, 2018; Eid & Al-Jabri, 2016; Jain et al., 2016; Lai, 2015; Mwakapina, 2016; Rashid & Rahman, 2014; Siemens & Weller, 2011; Susilo, 2014; Ta'amneh, 2017) have explained how using them has been fruitful for both teachers and students. The findings of these studies highlighted different aspects of the use of these two social media applications in EFL contexts: both their merits and demerits were explored. Some of their demerits were encountering difficulty when editing posts, using improper language, having superficial information, being exposed to cyberbullying and distracting students. The merits, on the other hand, have been accessing information anywhere and anytime, organising academic activities, learning wittingly and using a foreign language

With respect to the advantages of using both WA and FB as EFL teaching and learning tools, there have been more studies that have reported them. In nearly all of these studies, there has been a key factor that has ensured the success of the process of teaching and learning English using WA and FB: it has been rapport, the essence of social media applications. By nature, social media applications, namely WA and FB, rely on creating a friendly environment that does not only foster communication but also learning. Ajid et al. (2018) in their research have found that WA has been beneficial to student's knowledge of language. It has provided students with a supportive atmosphere and a learning community to improve their language domains. WA has played a great role to the largest extent in helping students learn English interactively and collaboratively (Mwakapina, 2016).

Using WA and FB has been no more restricted to general English. The role that can be played by social media in improving ESP cannot be denied (Dashtestani & Stoikovic, 2015). In ESP, there have been also many merits of using social media applications, namely WA and FB, for ESP teaching and learning. First, WA has assisted in decreasing the language anxiety of ESP students (Shamsi et al., 2019). Second, WA has developed ESP students' academic performance in English (Alhawiti, 2015; Barhoumi, 2015). Third, social media have offered ESP teachers in university environment the option to respond to students' work (Thrope, 2017). Finally, "Cyberspace provides ESP teachers or learners with multi-authentic learning materials related to their special needs and content area not to mention some several online educational tools and apps to boost effective courses in ESP or even to motivate self-study after class" (Chen & Chia, 2017, p.37).

Similarly, FB usage has had some merits such as building social capital among students and assisting students in strengthening their social relationship feeling that they belong to the same community. Even ESP students have

developed positive perspectives on FB as it has facilitated their English language learning by implanting in them a sense belonging to a large population of students who share the same interest of learning ESP (Raza et al., 2017).

Reviewing the previous studies has indicated that this topic has been the concern of a substantial number of researchers not only in the world but also in the Arab world. In the Arab context, many studies (Abdalfattah, 2015; Alzahrani, 2015; Awada, 2016; Mustafa, 2018; Rashid & Rahman, 2014) were carried out to investigate how these social media applications can assist students in improving their skills in English language and demonstrated their positive impact. However, there is a scarcity of research in Yemeni context in spite of being WA and FB widely used. Recent surveys, Battaglia (n.d.) and Napoleonact (2019), revealed that a substantial number of Yemeni people, who have access to the Internet, are active users of social media applications, namely WA and FB. The last five years witnessed a significant increase in using these social media applications in Yemen; though, to the best knowledge of the research only one study has been conducted by Ahmed (2019) to examine how WA can be used to improve students' writing skills at university level. Such a scarcity has urged the researcher to conduct the present study.

Moreover, while there are many studies (Ajid et al., 2018; Allagui, 2014; Castrillo et al., 2014; Minalla, 2018; Mwakapina, 2016; Tarmuji, 2016) investigated the impact of WA and FB on EFL students' skills in English and on their motivation to learn this language, little research (Chen & Chia, 2017; Thrope, 2017) was conducted to shed light on the impact of these social media applications when used in ESP contexts and this study was in only one major of applied sciences. This has urged the researcher to investigate the extent of using WA and FB to teach and learn ESP for four disciplines of applied sciences: engineering, computing and information technology, business and medicine and the impact of these social media applications on students' learning performance. Therefore, the present study aims at exploring the use and impact of WA and FB on students' learning performance in ESP contexts.

3. Method

Choosing the most appropriate method to be applied in a study always relies on the nature of the subject and the study questions. That is the reason why mixed-method is used in the present study. "The combination of quantitative data (statistical trends) and qualitative data (stories and personal experiences) is to draw interpretations from both for a better understanding of the issue than with one form of data" (Creswell, 2014, p.2). In the present study, questionnaires for teachers and students were administered and semi-structured-interviews with teachers were conducted.

3.1 Population and Sample of the Study

The population of the present study was ESP teachers and students at private Yemeni universities in Amanat Al Asimah who teach and study in four applied sciences disciplines: engineering, computing and information technology, business and medicine. The sample of the study was 13 ESP teachers (9 males and 4 females) and 406 ESP students (294 males and 112 females) from eight private universities in Amanat Al Asimah: Saba University, Yemeni Jordanian University, Yemania University, Queen Arwa University, Modern Sciences University, National University, Al- Nasser University and Civilisation University. The study was conducted in the second semester of the academic year 2019-2020. It is worth mentioning that shortly after the beginning of the second semester of the academic year 2019-2020, a state of emergency was declared in Yemen because of Covid-19 pandemic. Thus, purposive sampling was used to select the sample of the present study.

3.2 Data Collection Instruments

In order to gather data for the present study, two data collection instruments were used: questionnaires and semi-structured interview and they were built by the researcher.

3.2.1 Questionnaires

There were two questionnaires, one for teachers and the other one for students. These two questionnaires were similar in the dimension that addressed the teachers' and students' perspectives on the impact of WA and FB on students' learning performance when they are used in ESP contexts. However, the students' questionnaire was longer than that of the teachers: it had the dimension of using these social media applications. The questionnaires, then, were validated by five PhD holders, four of whom are experts in teaching ESL and an expert in statistics. "A pretest or pilot study is a means of checking whether the questionnaire can be administered and provide accurate data" (Cargan, 2007, p. 116). Therefore, the questionnaires were piloted.

To measure the reliability of the questionnaires, Cronbach's Alpha (α) was used. The reliability of both questionnaires was high: Cronbach's Alpha (α) of the teachers' questionnaire was 94% and that of the students'

questionnaire was 93%. Even the internal consistency validity of the questionnaires was strong. Then, the online questionnaires were designed using Google Form and were administered to the sample of the study.

3.2.2 Semi-structured Interview

Interviews are regarded as a very useful instrument to gather reliable qualitative data. "Interviews facilitate the collection of detailed personal data that provides a high degree of response quality, the opportunity for probing deeply into issues, and relatively low refusal rates from participants" (Block & Erskine, 2012, p.429) . Inasmuch as the semi-structured interview with teachers was the counter part of dimension one in the students' questionnaire, the researcher wrote questions to extract data relevant to the items of dimension one in the students' questionnaire. They were open-ended questions addressing the teachers' experience in teaching ESP and their use of WA and FB in ESP contexts. Then, a semi-structured interview was conducted with an ESP teacher to examine its validity. "If interviews are to be used, a wise researcher will conduct one or two pilot interviews to test out the interview... " (Lacey & Gerrish, 2010, p.23). The interviews were conducted over phone due to Covid-19 restrictions. "You can use phone interviews with participants who are not available for face-to-face interviews..." (Wilson, 2013b,p. 64).

3.2.3 Data Analysis Procedures and Approximate Scales

In the present study, different procedures were used to analyse the collected data. The quantitative data were analysed using the Statistical Package for the Social Sciences (SPSS) version 23. To analyse the qualitative data, the data were coded and analysed using thematic analysis. Thematic analysis (as cited in Lattery & Salman, 2020, p.33) is "a method for identifying, analysing and reporting patterns (themes) within data... Thematic analysis allows one to search for themes across the entire data set, rather than within a data item".

In regard to the approximate scales of five-point Likert scale that were used to explore the extent of the use of WA and FB in ESP contexts and of the impact of these applications on students' learning performance, there were two scales. See Table 1 and Table 2.

Table 1. Approximate scale for extent of using WA and FB in ESP contexts

Response	Mean (Range)	General Trend	Extent
<i>Rarely</i>	From 1 to 1.79	<i>Rarely</i>	
<i>Sometimes</i>	From 1.80 to 2.59	<i>Sometimes</i>	Low
<i>Often</i>	From 2.60 to 3.39	<i>Often</i>	Moderate
<i>Usually</i>	From 3.40 to 4.19	<i>Usually</i>	
<i>Always</i>	More than 4.20	<i>Always</i>	High

Albladi and Weir (2018, p.149) , Macfie and Nufrio (2006, p.70).

Table 2. Approximate scale for impact of using WA and FB in ESP contexts

Response	Mean (Range)	General Trend	Extent
<i>Strongly disagree</i>	From 1 to 1.79	<i>Strongly disagree</i>	
<i>Disagree</i>	From 1.80 to 2.59	<i>Disagree</i>	Low
<i>Not sure</i>	From 2.60 to 3.39	<i>Not sure</i>	Moderate
<i>Agree</i>	From 3.40 to 4.19	<i>Agree</i>	
<i>Strongly agree</i>	More than 4.20	<i>Strongly agree</i>	High

Albladi and Weir (2018, p.149) , Macfie and Nufrio (2006, p.70).

4. Results and Discussion

4.1 Extent of Using WA and FB in ESP Contexts

4.1.1 Extent of Teachers' Use of WA and FB in ESP Contexts

From the data gathered by the semi- structured interviews with teachers, two themes emerged. The first theme was (using WA and FB to obtain information about teaching ESP) and the second theme was (using these applications to be in contact with students for different purposes). These two themes represented the purposes the teachers in the present study used WA and FB for in ESP contexts. Regarding the first theme,78% of the teachers stated that they used both applications to have information about ESP. This can be exemplified by what teacher (A) said:

Being a member in both WA and FB groups with colleagues teaching English for business major students offers me the opportunity to share information about business topics and terminologies. This with no doubt enriches my experience especially that the members in these groups are from different nationalities in the Arab World.

Similarly, Chen and Chia (2017) indicated that what could facilitate the process of teaching an ESP course is cyberspace with all the authentic materials it provided for ESP teachers.

When it comes to the second theme, the teachers had different opinions except for the used social media application: No teacher said that they used FB to be in contact with their students. That is to say, WA was preferred by 68% of the teachers in the study.

4.1.2 Extent of Students' Use of WA and FB in ESP Contexts

To investigate the students' use of WA and FB in ESP contexts, the descriptive statistics for the twenty items in dimension one in the students' questionnaire are shown.

Table 3. Results of descriptive statistics of students' use of WA and FB

Extent of Students' Use of WA in ESP Contexts					Extent of Students' Use of FB in ESP Contexts				
Item#	Mean	Std. Deviation	Weighted Mean	General Trend	Item#	Mean	Std. Deviation	Weighted Mean	General Trend
1	3.14	1.466	3.3783	Often	2	2.13	1.380	2.0379	Sometimes
3	3.61	1.429			4	2.12	1.392		
5	3.59	1.496			6	2.29	1.478		
7	3.68	1.494			8	2.29	1.481		
9	3.36	1.536			10	2.07	1.392		
11	3.35	1.504			12	1.95	1.347		
13	3.39	1.583			14	1.88	1.348		
15	3.17	1.579			16	1.83	1.246		
17	3.16	1.586			18	1.88	1.318		
19	3.33	1.570			20	1.95	1.406		
Extent of Students' Use of Both WA and FB in ESP Contexts									
Mean 2.7081									
General Trend Often									

Table 3 provides the means, std. deviation, weighted means and general trends of the extent of students' use of WA and FB in ESP contexts. First, the items related to the use of WA were ranked. The first place was awarded to item (7): (I use WA to receive materials sent by my ESP teacher.) (mean=3.68, Std. deviation= 1.494). It was followed by item (3): (I use WA to exchange extra ESP materials: PDFs, Word files, Powerpoint, Videos etc. with my Peers.) (mean =3.61, std. deviation = 1.429). This result is similar to the results of previous studies: Alqasham's study (2018) indicated that collaboration and practice outside the classroom was achieved by using WA as a tool of learning, Ajid et. al. (2018) and Mwakapina (2016) pointed out that supportive atmosphere provided by WA contributed to improving students' language domains and Jin (2013) demonstrated that students valued collaborative learning as a consequence of sending sources to one another using social media. Regarding the general trend towards the extent of students' use of WA in ESP contexts, it was 'often' according to the approximate scale of five-point Likert scale, see Table 1, as the weighted mean was 3.3783. This indicated that the extent of the students' use of WA in ESP contexts was moderate.

Second, the items related to the use of FB. Table 3 shows that both item (6): (I use FB to follow any announcements made by the ESP teacher.) and item (8): (I use FB to receive materials sent by my ESP teacher.) came in the first place, mean = 2.29 indicating that the general trend for their mean was 'sometimes'. They were followed by item (2): (I use FB to be in contact with my peers in ESP course.), (mean= 2.13, std. deviation= 1.380) representing the general trend 'Sometimes'. Consistent with this result, Raza et. al. (2017) demonstrated that using FB built strong

relationships among ESP students who belong to the same community sharing the same interest of learning ESP. Similarly, Lai (2015) indicated that students used it to build strong relationships inside and outside the classroom. In addition, Siemens and Weller (2011) explained that FB enabled students to communicate with their classmates who lived in remote areas. Item (2) was followed by item (4): (I use FB to exchange extra ESP materials: PDFs, Word Files, Powerpoint, Videos etc. with my peers.), (mean=2.12, std. deviation= 1.392) representing the general trend 'sometimes'. This is similar to the results of a previous study. Eid and Al-Jabri (2016) demonstrated that the use of SNS tools led to the improvement achieved by students sharing knowledge.

The value of the weighted mean of the ten items related to the extent of using FB in ESP contexts in dimension one in students' questionnaire was 2.0379. This result indicated the general trend towards the extent of using FB in ESP contexts was 'sometimes'. That is to say, the extent of students' use of FB in ESP contexts was low. This result is similar to Rodliyah (2016) who demonstrated that students' participation in FB groups was low which he attributed to being them busy achieving other tasks.

Table 3 also indicates that ESP students often used both WA and FB in ESP contexts with mean (2.7081). In other words, the extent of students' use of both WA and FB in ESP contexts was moderate. It seems possible that these results are due to the students' real interest in using these social media applications in ESP courses.

4.2 Impact of the Demographic Factors on the Teachers' Use of WA and FB

Regarding the impact of the demographic factors on the teachers' use of WA and FB was as follows: gender and the university they taught in had no impact, the taught major had little impact especially on teachers who teach medicine major students, the taught level had moderate impact on teachers' willingness to use WA in ESP contexts as far as first level students were concerned and the used social media impact was high.

4.3 Impact of Using WA and FB on Students' Learning Performance from Teachers' Perspective

For the sake of exploring the impact of using WA and FB in ESP contexts on students' learning performance from teachers' perspective, the descriptive statistics of dimension one in the teachers' questionnaire were provided.

Table 4. Results of descriptive statistics of impact of WA and FB from teachers' perspective

Impact of Using WA on Students' Learning Performance from teachers' perspectives					Impact of Using FB on Students' Learning Performance from teachers' perspectives				
Item#	Mean	Std. Deviation	Weighted Mean	General Trend	Item#	Mean	Std. Deviation	Weighted Mean	General Trend
1	3.54	1.050	3.2154	Not Sure	2	3.38	1.121	3.1846	Not Sure
3	3.15	.899			4	2.85	.899		
5	3.23	1.235			6	3.15	1.214		
7	3	1.080			8	2.77	1.092		
9	2.85	1.068			10	2.69	1.109		
11	3.31	.947			12	3.38	.870		
13	3.31	1.032			14	3.85	.987		
15	3.62	1.193			16	3.69	1.109		
17	3.23	1.013			18	3	1.080		
19	2.92	1.038			20	3.08	.954		
Impact of Using Both WA and FB on Students' Learning Performance									
Mean 3.2000									
General Trend Not sure									

Table 4 shows that item (15): (Using WA help students participate actively in class activities of ESP), was ranked in the first place (mean= 3.62, std. deviation=1.193) representing the general trend 'agree'. Item (15) was followed by item (1): (mean= 3.54, std.deviation= 1.050) representing the general trend 'agree'. This result matched the results of earlier research. Castrillo (2014), and Hashemifardnia et. al.(2018) indicated that using WA played a

great role in assisting students in learning vocabulary. The value of weighted mean of all ten items related to the impact of using WA in ESP contexts was 3.215 representing 'not sure'. Therefore, the impact of using WA in ESP contexts was moderate from teachers' perspective.

Then, the items related to the impact of FB were ranked. In the first place came item (14): (Using FB helps students improve their research skills about ESP topics.), (mean= 3.85, std. deviation=.987) representing the general trend 'agree'. When it comes to the general trend of all ten items related to the impact of using FB in ESP contexts, it was 'not sure'. This indicated that the impact of using FB in ESP was moderate from teachers' perspective. Finally, the value of the weighted mean of all twenty items related to the impact of using both WA and FB in ESP contexts was 3.2000 representing 'not sure'. Therefore, the extent of the impact of using both WA and FB in ESP on students' learning performance was moderate from teachers' perspective.

4.4 Impact of Using WA and FB on Students' Learning Performance from Students' Perspective

In dimension two in students' questionnaire, the items that are related to the impact of using WA and FB in ESP contexts on students' learning performance were analysed.

Table 5. Results of descriptive statistics of impact of WA and FB from students' perspective

Impact of Using WA on Students' Learning Performance from students' perspectives					Impact of Using FB on Students' Learning Performance from students' perspectives				
Item#	Mean	Std. Deviation	Weighted Mean	General Trend	Item#	Mean	Std. Deviation	Weighted Mean	General Trend
21	3.80	1.113	3.6978	Agree	22	3.15	1.289	3.1027	Not sure
23	3.78	1.117			24	3.21	1.264		
25	3.75	1.147			26	3.15	1.317		
27	3.70	1.152			28	3.07	1.291		
29	3.91	1.118			30	3.20	1.310		
31	3.57	1.146			32	3.00	1.247		
33	3.53	1.192			34	3.25	1.317		
35	3.71	1.135			36	3.09	1.267		
37	3.64	1.197			38	2.82	1.257		
39	3.60	1.239			40	3.10	1.354		
Impact of Using Both WA and FB on Students' Learning Performance									
Mean 3.4002									
General Trend Agree									

A look at Table 5 shows that item (29) was awarded the first place; the value of its mean was 3.91 which represented 'agree' in the approximate scale of five-point Likert scale and its std. deviation was 1.118. This result is compatible to the results of earlier studies. Tarmuji (2016), Awada (2016), Allagui (2014), and Ahmed (2019) demonstrated that significant improvement in students' writing skills was achieved when WA was used to teach students writing. Item (29) was followed by item (21): (mean=3.80, std. deviation = 1.113) the mean represents 'agree'. This matched the result of Alhawiti's study (2015) about using WA by ESP students to learn terminologies. He indicated that WA could be regarded as a useful tool to show and learn English terms. The general trend towards the impact of using WA was 'agree': The value of the weighted mean was 3.6978 indicating that the impact of using WA in ESP contexts was high from students' perspective.

Table 5 also shows the descriptive statistics for the impact of using FB in ESP contexts on students' learning performance. It illustrates that the highest mean was awarded to item (34): (Using FB helps me improve my research skills about ESP contexts.), (mean=3.25, std. deviation = 1.317) Thus, the extent of the impact of using FB in ESP contexts on students' learning performance from students' perspective was moderate. The general trend was 'not sure' as the value of the weighted mean of all items related to FB was 3.1027.

In addition, Table 5 illustrates that the general trend towards the impact of using both WA and FB in ESP contexts on students' learning performance was 'agree'. This indicated that the extent of the impact of using WA and FB in ESP contexts on students' learning performance was high from students' perspective. A likely explanation for this result is that students noticed a great difference in their performance when they started using these social media applications to learn ESP.

4.5 Correlation between Students' Use of WA and FB and their Impact

Simple linear regression was used to show the correlation and its strength between the extent of using both WA and FA in ESP contexts and the impact of using both WA and FB on students' learning performance.

Table 6. Results of simple linear regression

Variables	R	R Square	F	F P Value	B	T	T P Value
Extent of using WA and FB in ESP contexts & their impact	.600**	.360	227.330	.000	.534	15.077	.000

Table 6 indicates that the correlation was a positive linear correlation, $R = .600$ and the percentage of the influence of the independent variable on the dependent variable was 36%. Even though this percentage was moderate, it was significant as it was indicated by the value of F , $F = 227.330$, and its P value = $.000 < 0.01$ in addition to the value of $T = 15.077$ and its P value = $.000$.

4.6 Correlation between Students' Use of WA and FB and their Impact while Controlling for the Demographic Factors

To examine whether demographic factors have any influence on the strong, positive correlation $R = .600$, between the extent of using WA and FB in ESP contexts and the impact of using them on students' learning performance, partial correlation was conducted. It is worth mentioning here that 'university' variable was omitted by Google forms and retrieving it was not possible as there is no history in the new version of Google forms.

Table 7. Results of partial correlation

Variables	Correlation between variables while controlling for teachers' demographic data									
	Gender		Major		Educational level		Used Social media		Using WA&FB in private life	
	R	P-value	R	P-value	R	P-value	R	P-value	R	P-value
Using WA and FB & their impact	.591	.000	.599	.000	.604	.000	.593	.000	.527	.000

Table 7 indicates the extent of student's use of WA and FB in their private lives had a moderate effect: $R = .527$, $P = .000 < 0.01$. Controlling for students' gender, major, and the used social media had a very little effect. In regard to the students' educational level, it had no effect.

5. Summary

The results of the present study have answered its questions. First, the results have indicated that the extent of teachers' and students' use of WA and FB in ESP contexts is moderate. Second, the results have indicated that among all demographic factors only have the used social media in private life and the extent of using WA and FB in private life highly impacted teachers' use of WA and FB in ESP contexts. Third, the results have revealed that the impact of WA and FB on students' learning performance when used in ESP contexts is moderate from teachers' perspectives while it is high from students' perspectives. Fourth, the results of the present study have demonstrated that there is a strong correlation between the extent of using these social media applications and their impact on students' learning performance. Finally, the results have indicated the demographic factors have differently affected the correlation between using WA and FB in ESP and their impact on students' learning performance: the

extent of using WA and FB in private life has had moderate impact, gender, major and the used social media in private life have had little impact while students' educational level has had no impact.

6. Conclusions

The study has arrived at some main conclusions. One of the most important conclusions is that teachers and students use WA and FB differently in ESP contexts. While the majority of the teachers prefer using WA to FB to contact their students in ESP courses and restrict FB to obtaining information about ESP, the majority of the students prefer using both WA and FB. Another important conclusion is that both students and teachers believe that using these applications in ESP contexts impact students' learning performance. However, teachers think that these social media applications can only increase the students' ESP vocabulary, assist students in participating actively in the classroom, and improve their research skills. Students, on the other hand, stated that WA and FB do not only increase their ESP vocabulary but they also improve their reading and writing skills. One more important conclusion is that although the teachers believe that FB impacts their students' learning performance, they never used it to contact them.

6.1 Recommendations

In the light of the results of the present study, some recommendations are made. First, universities need to conduct awareness-raising workshops aim for teachers about the importance of adopting social media applications namely, WA and FB in teaching ESP. Moreover, the Ministry of Higher Education and Scientific Research is recommended to introduce a university requirement course on the use of technology in learning and teaching. For future research, it is recommended that future research investigate the use of other social media applications.

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Appendices

Appendix (1)

Teachers' Questionnaire

First: Personal Information

- 1. **Gender:** 1. Male () 2. Female ()
- 2. **I teach at:**
 - 1. Saba University () 2. Yemeni Jordanian University ()
 - 3. Yemenia University () 4. Queen Arwa University ()
 - 5. Modern Sciences University () 6. National University ()
 - 7. Al- Nasser University () 8. Civilisation University ()
- 3. **I teach ESP for this/ these major(s):**
 - 1. Engineering () 2. Computing and IT () 3. Business ()
 - 4. Medicine ()
- 4. **I teach ESP for this / these level(s):**
 - 1. First 2. Second 3. Third 4. Fourth 5. Others
- 5. **The social media application I use in my private life:**
 - 1. WhatsApp () 2. Facebook () 3. Both WhatsApp and Facebook ()
- 6. **The extent of using WhatsApp in my private life:**
 - 1. Rarely() 2. Sometimes() 3. Often() 4. Usually() 5. Always()
- 7. **The extent of using Facebook in my private life:**
 - 1. Rarely() 2. Sometimes() 3. Often() 4. Usually() 5. Always()

Second: The Impact of Using Social Media (WhatsApp and Facebook) in ESP Contexts						
No	Item	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1	Using WhatsApp helps students increase their ESP vocabulary.					
2	Using Facebook helps students increase their ESP vocabulary.					
3	Using WhatsApp helps students improve their reading comprehension skills in ESP.					
4	Using Facebook helps students improve their reading comprehension skills in ESP.					
5	Using WhatsApp helps students improve their listening skills in ESP.					
6	Using Facebook helps students improve their listening skills in ESP.					
7	Using WhatsApp helps students improve their speaking skills in ESP.					
8	Using Facebook helps students improve their speaking skills in ESP.					
9	Using WhatsApp helps students improve					

	their writing skills in ESP.					
10	Using Facebook helps students improve their writing skills in ESP.					
11	Using WhatsApp helps students improve their presentation skills in ESP.					
12	Using Facebook helps students improve their presentation skills in ESP.					
13	Using WhatsApp helps students improve their research skills about ESP topics.					
14	Using Facebook helps students improve their research skills about ESP topics.					
15	Using WhatsApp helps students participate actively in class activities of ESP.					
16	Using Facebook helps students participate actively in class activities of ESP.					
17	Using WhatsApp facilitates students' study for ESP exams.					
18	Using Facebook facilitates students' study for ESP exams.					
19	Using WhatsApp motivates students to learn ESP.					
20	Using Facebook motivates students to learn ESP.					

9	I use WhatsApp to ask my teacher some questions about ESP subjects.					
10	I use Facebook to ask my teacher some questions about ESP subjects.					
11	I use WhatsApp to prepare my ESP assignments.					
12	I use Facebook to prepare my ESP assignments.					
13	I use WhatsApp to submit my assignments to my ESP teacher.					
14	I use Facebook to submit my assignments to my ESP teacher.					
15	I use WhatsApp to have my ESP teacher's permission (e.g. for delaying a presentation... etc)					
16	I use Facebook to have my ESP teacher's permission (e.g. for delaying a presentation... etc)					
17	I use WhatsApp to prepare for individual / group presentations of ESP.					
18	I use Facebook to prepare for individual / group presentations of ESP.					
19	I use WhatsApp to study for my ESP exams.					
20	I use Facebook to study for my ESP exams.					
Third: The Impact of Using Social Media (WhatsApp and Facebook) on the Performance of ESP Learners						
No	Item	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
21	Using WhatsApp helps me increase my ESP vocabulary.					
22	Using Facebook helps me increase my ESP vocabulary.					
23	Using WhatsApp helps me improve my reading comprehension skills in ESP.					
24	Using Facebook helps me improve my reading comprehension skills in ESP.					
25	Using WhatsApp helps me improve my listening skills in ESP.					
26	Using Facebook helps me improve my listening skills in ESP.					

27	Using WhatsApp helps me improve my speaking skills in ESP.					
28	Using Facebook helps me improve my speaking skills in ESP.					
29	Using WhatsApp helps me improve my writing skills in ESP.					
30	Using Facebook helps me improve my writing skills in ESP.					
31	Using WhatsApp helps me improve my presentation skills in ESP.					
32	Using Facebook helps me improve my presentation skills in ESP.					
33	Using WhatsApp helps me improve my research skills about ESP topics.					
34	Using Facebook helps me improve my research skills about ESP topics.					
35	Using WhatsApp helps me participate actively in class activities of ESP.					
36	Using Facebook helps me participate actively in class activities of ESP.					
37	Using WhatsApp facilitates my study for ESP exams.					
38	Using Facebook facilitates my study for ESP exams.					
39	Using WhatsApp motivates me to learn ESP.					
40	Using Facebook motivates me to learn ESP.					

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