

# Mobile Devices in EFL Teaching in Saudi Arabia: A Comparison of Student and Faculty Attitudes and Usage

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## Abstract

There is a paucity of studies comparing student and faculty skills and attitudes regarding the use of mobile devices in English as a Foreign Language (EFL) instruction, particularly in the Gulf region. This study investigated the skills and attitudes of students and their instructors regarding the use of mobile devices in English language learning at a university in Saudi Arabia. Ownership patterns for mobile devices were found to be different between students and faculty members, with students owning proportionally more smartphones than faculty members. Significant differences were found between student and faculty members with respect to computer, Internet and mobile device skills. Faculty members rated themselves higher than students for a number of computer and Internet skills, while students rated themselves higher than faculty members for a range of mobile device skills. In general, student and faculty member attitudes towards using mobile devices in English language learning were similar and positive. Both students and faculty members also expressed positive sentiments about their future intentions to use mobile devices for English language learning. Mobile device skill was found not to be a significant determinant in either attitudes towards mobile devices or future intention to use mobile devices in English language learning.

**Keywords:** mobile devices, student attitudes, faculty attitudes, English as a Foreign Language, higher education

## 1. Introduction

Information and Communication Technology (ICT) has long played a key role in education, especially in the field of foreign language learning and teaching. Computer-Assisted Language Learning (CALL) was first introduced in the 1960s, and many studies have investigated its effectiveness (Lee, 2000). Since then, the computer has proven to be a powerful tool for teaching English, particularly when combined with an Internet connection (Tayebnik & Puteh, 2012). Perhaps of greater promise to foreign language learning are the mobile technologies. Mobile devices such as smartphones and tablets offer innovative ways of teaching owing to the extended reach of mobile phone infrastructure. For example, teachers can deliver learning content to their students via mobile devices (Shohel & Banks, 2010), and students can use mobile technologies to support their acquisition of language (Jantjies & Joy, 2013; Nah, White, & Sussex, 2008; Shih, 2005; Tayebnik & Puteh, 2012; Thornton & Houser, 2005). Further, mobile devices are particularly attractive as teaching tools because of their significant contributions in the provision of universal access to learning regardless of social class, gender or ethnicity (Chen, 2016).

Accompanying the rapid developments in mobile technologies are changes in the perceptions and acceptance of mobile learning (Chen, 2016). However, despite a diversity of research into mobile learning, much has focused primarily on students. There is also the need to consider the instructors who are expected to implement mobile technologies (Baran, 2014). The aim of this study was to explore both the skills and attitudes of EFL instructors and the students they teach at a university in Saudi Arabia with regard to the use of mobile devices. Specifically, the aim was to identify which skills and attitudes among these two groups might be points of convergence or divergence. For all institutions, finding these points of commonalities and differences between students and their teachers can be helpful to ensure the effective integration of mobile devices as tools for teaching and learning.

## 2. Literature Review

Students and their instructors often have different attitudes towards the use of mobile devices for learning. For example, in a university setting, Pollara (2011) found that faculty members' perceptions of the use of mobile devices by their students did not match the actual student use of those devices. Although students indicated that they used mobile devices for a wide range of instructive tasks, faculty believed that students used mobile devices primarily to socialise (Pollara, 2011). It has been argued that differing attitudes between students and instructors about the utility of mobile device for learning could be due to how these devices are viewed by both parties. Students view mobile devices as essential elements of social life, while many of their instructors treat them as being peripheral to learning (Domitrek & Raby, 2008). Similarly, Garcia (2007) reported that students and faculty viewed mobile devices differently, with students believing that without them classrooms would become disjointed and even more unrealistic and artificial.

Two typical responses by faculty are evident in the research regarding the use of mobile devices in the classroom (Bayless, Clipson, & Wilson, 2013). The first, is to ban these devices from the classroom, and the

second is to embrace them in the learning process (Berry & Westfall, 2015). Although positive results have been reported when mobile devices have been banned from classrooms (Bugeja, 2007), other faculty members view bans, and even guidelines, as restrictive and unnecessary (Gilroy, 2004). Berry and Westfall (2015) reported the positive impacts of mobile devices in classrooms, with students easily able to incorporate these devices into their normal routine, for example, fact-checking, looking up supplementary information and taking pictures of classroom boards or materials (Berry & Westfall, 2015). Forkosh-Baruch and Meishar-Tal (2016) examined the factors that might cause instructors either to ban mobile devices in their classrooms (which they referred to as adopting a 'preventative mode') or to initiate and support mobile device usage (referred to as a 'proactive mode'). The authors found that the more instructors knew about how to use mobile devices in their classrooms, the more likely they were to display a proactive mode of response and the less likely to display a preventative mode (Forkosh-Baruch & Meishar-Tal, 2016).

However, it does appear that faculty members are becoming increasingly predisposed to the use of mobile devices in the classroom. Al-Emran, Elsherif & Shaalan (2016) reported positive attitudes of faculty members towards mobile devices, concluding that mobile devices in learning could be adopted by all educators irrespective of age, academic rank, academic experience and level of mobile device ownership. Further, positive attitudes of faculty members towards mobile devices have been shown to be significantly correlated with the level of familiarity with the devices and their uses (Forkosh-Baruch & Meishar-Tal, 2016). Thus, as mobile ownership grows, one might expect faculty attitudes towards the use of mobile devices in teaching and learning to be become increasingly positive as well.

A limited number of studies have explored both student and faculty attitudes towards mobile device usage in English language learning. Those studies that have been undertaken generally focused on students, finding them positively inclined towards the use of mobile devices in English language learning (e.g., Lu, 2008; Omari, Bourekkadi, Slimani, Khouli & Kerkeb, 2017). The paucity of studies examining faculty attitudes towards mobile device use in English language learning - particularly in the Gulf area, the context for this study - reflects the general trend in the literature of a limited number of studies of instructor attitudes towards the use of mobile devices in universities (Al-Emran et al., 2016). Given the importance of learning EFL (Almarwani, 2011), the increasing use and popularity of mobile devices in teaching and learning, and the influence of instructor skills and attitudes regarding the adoption of mobile devices in the classroom, further research in this area is clearly necessary.

To help address this lack of research, this study, situated in a university in Saudi Arabia, sought to answer the following research questions:

1. Are ownership patterns of mobile devices similar for students and faculty members?
2. Are there any significant differences between students' and faculty members' computer, Internet and mobile device skills?
3. Are there any significant differences between students' and faculty members' attitudes towards using mobile technology in English language learning?
4. Are there any significant differences between students' and faculty members' future intentions to use mobile devices in English language learning?

### **3. Methodology**

#### **3.1 Study Context and Sample**

The study was undertaken at an all-male university located at a major urban centre in central-north Saudi Arabia. The university has approximately 34,286 students enrolled across the various faculties, all of whom study on campus. As part of their university studies, all new students need to complete a preparatory year to improve their knowledge and skills before they undertake their chosen majors. One of the key skills required is English language proficiency. To achieve the required level of English, the university has established an English Centre, which delivers an intensive English program for all students in the preparatory year. The study sample was drawn from male students enrolled in the preparatory year English program and their English language instructors who were faculty members at the English Centre.

#### **3.2 Data Collection**

Students and faculty members each completed a web-based survey comprising two parts. The first part collected demographic information about the study participants. The second part contained a series of seven-point Likert scale items with participants self-rating the following: skills using computers, the Internet and mobile devices; attitudes towards mobile devices and mobile learning in EFL instruction; and behavioural intention to use mobile devices to support English language learning. The survey items were similar for both students and faculty members, and any changes made were simply to reflect the perspective of the respondent (e.g., *I would find mobile technology (MT) useful in my English language learning/teaching*).

### 3.3 Data Analysis

Data from the student and faculty member web-based surveys were analysed in two ways. First, descriptive statistical techniques were used to obtain frequencies, means and standard deviations, and to perform reliability testing. Second, independent samples t-tests were applied to determine if there were any statistically significant differences between students and faculty members for the various scale items.

## 4. Results

### 4.1 Sample Size and Response Rates

Regarding the student web-based survey, there were 425 valid student survey responses out of a study population of 2476 students. This gave a response rate of 17%. The sample size was considered acceptable based on the calculated sample of 333 participants for a margin of error of 5.0% and a 95% confidence level. The average student age was 19.7 years.

For the faculty member web-based survey, 40 faculty members from the English Centre took part in the web-based survey out of a possible population of 45. This represented a response rate of 89%. Faculty member sample size was also considered within acceptable limits based upon the calculated sample of 41 participants for a margin of error of 5.0% and a 95% confidence level. The average age of faculty members was 38.9 years and the average teaching experience was 10.6 years.

### 4.2 Internal Reliability of Scale Items

Cronbach's alpha reliability values ranged between 0 and 1, with acceptable values of Cronbach's alpha in the range of 0.6 to 0.8 (Cooksey, 2007). Cronbach's alpha values for the respective scale items are given in Table 1. All Cronbach's alpha values for both student and faculty scale items fell into the acceptable range.

Table 1. Cronbach's alpha values for student and faculty scale items

Scale	$\alpha$ Students	$\alpha$ Faculty
Computer skills	.83	.91
Internet skills	.87	.85
Mobile device skills	.95	.97
Attitudes towards ICT	.80	.83
Attitudes towards using mobile devices in English language learning	.82	.91
Future intention to use mobile devices in English language learning	.94	.87

### 4.3 Mobile Device Ownership

Table 2 presents the type of mobile devices owned by students and faculty members. The majority of students (88.7%) owned a smartphone, compared with 65% of faculty members, reflecting the popularity of smartphones among the student population. More cell phones were owned by faculty members (60.0%) than by students (22.6%). Faculty members, having a higher average age than students (38.9 years compared with 19.7 years) might be expected to own older mobile devices such as cell phones.

Table 2. Student and faculty mobile device ownership

Item	Group	Sample	No. of Devices	Ownership (%)
Smartphone	Student	425	337	88.7
	Faculty	40	26	65.0
Cell phone	Student	425	96	22.6
	Faculty	40	24	60.0
Tablet PC	Student	425	54	12.7
	Faculty	40	11	27.5
Personal Digital Assistants	Student	425	6	2.1
	Faculty	40	0	0.0
eBook Reader	Student	425	4	0.9
	Faculty	40	5	12.5
Other	Student	425	12	2.8
	Faculty	40	0	0.0

Inspection of the frequency distributions also revealed that 22.5% of faculty members owned neither a smartphone nor a tablet PC. Consequently, these faculty members may not be able to take advantage of the affordances offered by these particular types of mobile device, such as increased mobility. In contrast, only 10% of students owned neither a smartphone nor a tablet PC

### 4.4 Student and Faculty Member Skills Using Computers, the Internet and Mobile Devices

Students and faculty members were asked to assess their skills in using computers, the Internet and mobile

devices to carry out a range of activities. Skill levels were assessed using a seven-point Likert scale: 1. Never used, 2. Not very skilled, 3. Fairly skilled, 4. Skilled, 5. Moderately skilled, 6. Highly skilled, and 7. Extremely skilled. Independent samples t-tests were used to identify if there were any statistically significant differences in these three sets of skill levels between students and faculty members. These results are presented in Tables 3, 4 and 5.

For computer skills (Table 3), statistically significant differences between student and faculty members were found for two of the three survey items: *play digital audio files without accessing the Internet* ( $p = .000$ ,  $d = -.74$ ) and *manage/manipulate digital photos* ( $p = .201$ ,  $d = -.37$ ). Faculty members believed themselves to be both more skilled than their students at playing digital files without accessing the Internet and managing/manipulating digital photos. The values of Cohen's  $d$  indicated a medium effect size for playing audio files ( $-.74$ ) and a small effect size for managing/manipulating digital photos ( $-.37$ ).

Table 3. Student and faculty member computer skills

Item	Group	N	Mean	SD	t	p	Cohen's d
To play digital audio files without accessing the Internet	Student	422	3.1	1.88	-3.86	.000*	-.74
	Faculty	40	4.5	2.26			
To create/edit audio and video	Student	409	3.2	1.80	-1.28	.201	-.22
	Faculty	38	3.6	2.00			
To manage/manipulate digital photos	Student	409	3.2	1.79	-2.2	.028*	-.37
	Faculty	39	3.9	1.94			

\*  $p < .05$ , Cohen's  $d$ : .2 small, .5 medium, > .8 large

Regarding Internet skills (Table 4), statistically significant differences between student and faculty members were found for four of the five survey items: *make phone calls* ( $p = .000$ ,  $d = -.58$ ); *look up reference information for study purposes* ( $p = .000$ ,  $d = -.60$ ); *send or receive email* ( $p = .000$ ,  $d = -.68$ ); and *buy or sell things* ( $p = .000$ ,  $d = -.63$ ). For all four items, faculty members believed themselves to be more skilled than their students. The values of Cohen's  $d$  indicated a medium effect size for all four items.

Table 4. Comparison of student and faculty member Internet skills

Item	Group	N	Mean	SD	t	p	Cohen's d
To make phone calls (e.g., Skype)	Student	422	4.2	2.30	-4.7	.000*	-.58
	Faculty	40	5.5	1.58			
To use social networking software on the web	Student	405	5.1	1.98	.12	.0907	.02
	Faculty	39	5.0	1.86			
To look up reference information for study purposes	Student	409	4.6	1.79	-4.74	.000*	-.60
	Faculty	39	5.7	1.26			
To send or receive emails	Student	405	4.7	2.08	-6.4	.000*	-.68
	Faculty	38	6.1	1.15			
To buy or sell things (e.g., E-Mall)	Student	412	3.3	2.04	-3.82	.000*	-.63
	Faculty	40	4.6	1.97			

\*  $p < .05$ , Cohen's  $d$ : .2 small, .5 medium, > .8 large

For mobile device skills (Table 5), statistically significant differences between student and faculty members were found for three of the eight survey items: *text/SMS people* ( $p = .024$ ,  $d = .37$ ); *download games or applications from the Internet* ( $p = .001$ ,  $d = .72$ ); and *send pictures or movies to other people* ( $p = .003$ ,  $d = .51$ ). For all three items, students believed themselves to be more skilled than faculty members. The values of Cohen's  $d$  indicated a small effect size for *text/SMS people* and medium effect sizes for *downloading games and applications* and *sending movies and pictures to other people*.

Table 5. Comparison of student and faculty member mobile device skills

Item	Group	N	Mean	SD	t	p	Cohen's d
To text/SMS people	Student	423	6.0	1.76	2.26	.024*	.37
	Faculty	40	5.3	1.69			
To call people	Student	414	6.2	1.58	.75	.451	.13
	Faculty	39	6.0	1.29			
To download games or applications from the Internet	Student	418	5.9	1.75	3.69	.001*	.72
	Faculty	40	4.7	2.13			
To send pictures or movies to other people	Student	412	6.0	1.66	3.02	.003*	.51
	Faculty	39	5.2	1.79			
To play and upload audio files	Student	416	5.3	1.99	1.66	.099	.27
	Faculty	40	4.8	1.99			
To access information/services on the web	Student	419	5.6	1.82	1.21	.228	.21
	Faculty	38	5.2	1.78			
To take digital photos/movies	Student	417	5.6	1.87	1.78	.075	.03
	Faculty	40	5.1	1.74			
To send or receive emails	Student	419	5.2	2.09	-1.49	.142	-.2
	Faculty	40	5.7	1.61			

\*  $p < .05$ , Cohen's  $d$ : .2 small, .5 medium, > .8 large

#### 4.5 Student and Faculty Member Attitudes Towards Using Mobile Technology in English Language Learning

Students and faculty members were asked about their attitudes towards using mobile technology in English language learning. Student and faculty perceptions were assessed using a seven-point Likert scale: 1. Strongly disagree, 2. Disagree, 3. Somewhat disagree, 4. Neither agree or disagree, 5. Somewhat agree, 6. Agree, and 7. Strongly agree. Independent samples  $t$  tests were used to identify if there were any statistically significant differences in the skill levels between student and faculty members. These results are presented in Table 6

Table 6. Student and faculty member attitudes towards using mobile technology in English language learning

Item	Group	N	Mean	SD	t	p	Cohen's d
I would find mobile technology (MT) useful in my English language learning/teaching	Student	401	5.42	1.82	1.69	.194	.218
	Faculty	39	5.03	1.32			
I believe that mobile technology would enable me to accomplish tasks more quickly	Student	401	5.22	1.72	1.67	.096	.282
	Faculty	39	4.74	1.48			
Mobile technology will enable me to access English language learning content more often	Student	396	5.15	1.69	.61	.542	.090
	Faculty	38	5.00	1.38			
Taking a mobile-supported English language course would provide me with an efficient way to utilise my time	Student	395	4.95	1.81	1.15	.252	.190
	Faculty	38	4.61	1.57			
I believe it would be more convenient to access English language learning content via a mobile device over using a computer	Student	395	4.82	1.77	1.05	.292	.177
	Faculty	39	4.51	1.59			
I believe that it would take me longer to accomplish English language learning tasks using a mobile device	Student	392	4.04	1.87	-.481	.631	-.081
	Faculty	37	4.19	1.70			
I believe I would find it easy to use a mobile device to support my English language learning/teaching	Student	396	4.93	1.73	1.01	.313	.169
	Faculty	39	4.64	1.53			
I think it might take me a while to get comfortable with using a mobile device for English language learning/teaching	Student	395	4.25	1.83	.53	.597	.094
	Faculty	36	4.08	1.65			
I feel that I would have the knowledge necessary to use mobile devices to support my English language learning/teaching	Student	394	4.87	1.74	.18	.861	.029
	Faculty	39	4.82	1.39			
Using mobile technology would not be compatible with the way I learn/teach English	Student	393	4.15	1.79	1.81	.071	.315
	Faculty	37	3.59	1.67			
I believe I would be more willing to use mobile technology if I had support if I needed help	Student	390	4.97	1.80	-.26	.793	-.044
	Faculty	39	5.05	1.84			

Item	Group	N	Mean	SD	t	p	Cohen's d
Using mobile technology for English language learning is a good idea	Student	395	5.11	1.78	.29	.776	.046
	Faculty	38	5.03	1.52			
Mobile technology will make learning English more interesting	Student	397	5.14	1.80	.45	.651	.079
	Faculty	37	5.00	1.49			
Working with mobile technology will be fun	Student	397	5.18	1.74	.78	.44	.088
	Faculty	38	5.03	1.13			
I would be anxious about having to use my mobile device to support my English language learning/teaching	Student	401	3.90	1.91	.39	.701	.058
	Faculty	38	3.79	1.58			
Currently using a mobile device and the associated services are too expensive	Student	396	4.48	1.74	.33	.741	.058
	Faculty	37	4.38	1.72			
Overall, I think using mobile technology would be beneficial to my English language learning/teaching and I would be willing to adopt it in the future	Student	397	5.09	1.86	-.079	.937	-.011
	Faculty	37	5.11	1.43			

\*  $p < 0.05$ , Cohen's  $d$ : 0.2 small, 0.5 medium,  $> 0.8$  large

Overall, as indicated by the means of the student and faculty member groups, attitudes towards using mobile technology in English language learning were generally positive. Independent samples t-test results indicated that there were no significant differences between student and faculty members for any of the survey items. Thus, students and faculty members held similar attitudes towards using mobile technology for English language learning.

Despite the overall level of positivity, there were two survey items worth noting for which both students and faculty members remained largely uncertain (i.e., neither agreed nor disagreed). First, *I believe that it would take me longer to accomplish English language learning tasks using a mobile device* (students:  $M = 4.04$ ,  $SD = 1.87$ ; faculty:  $M = 4.19$ ,  $SD = 1.70$ ). Second, *I think it might take me a while to get comfortable with using a mobile device for English language learning/ teaching* (students:  $M = 4.25$ ,  $SD = 1.83$ ; faculty:  $M = 4.08$ ,  $SD = 1.65$ ).

#### 4.6 Student and Faculty Member Future Intentions to Use Mobile Devices in English Language Learning

Students and faculty members were asked about their future intentions to use mobile devices in English language learning. Student and faculty member perceptions were assessed using a seven-point Likert scale: 1. Strongly disagree, 2. Disagree 3. Somewhat disagree, 4. Neither agree or disagree, 5. Somewhat agree, 6. Agree, and 7. Strongly agree. Independent samples t- tests were used to identify if there were any statistically significant differences in the skill levels between student and faculty members. These results are presented in Table 7.

Table 7. Student and faculty future intentions to use mobile devices in English language learning

Item	Group	N	Mean	SD	t	p	Cohen's d
I would like to see mobile technology incorporated into my English language learning/teaching	Student	398	4.90	1.97	.34	.731	.06
	Faculty	37	4.78	1.80			
I would like to / I would like my students to be able to easily view their English language learning course materials on their mobile devices	Student	396	5.04	1.81	-2.34	.023*	-.30
	Faculty	38	5.58	1.31			
I would like to / I would like my students to be able to access education management systems (e.g., Moodle) for English language learning on their mobile devices	Student	396	4.96	1.83	-1.35	.178	-.23
	Faculty	37	5.38	1.50			
I would like to / I would like my students to be able to take quizzes for their English language learning on their mobile devices	Student	398	4.95	1.86	2.06	.04*	.35
	Faculty	38	4.29	2.17			
I would like to / I would like my students to be able to participate in discussion forums for their English language learning from their mobile devices	Student	394	4.86	1.91	-1.96	.055	-.23
	Faculty	38	5.32	1.32			

\*  $p < 0.05$ , Cohen's  $d$ : 0.2 small, 0.5 medium,  $> 0.8$  large

Regarding student and faculty member future intentions to use mobile devices in English language learning, statistically significant differences were found for two of the five survey items: *I would like to / I would like my students to be able to easily view their English language learning course materials on their mobile devices* ( $p = .023$ ,  $d = -.30$ ) and *I would like to / I would like my students to be able to take quizzes for their English language learning on their mobile devices* ( $p = .004$ ,  $d = .35$ ). The values of Cohen's  $d$  indicated a small effect size for both survey items.

For *I would like to / I would like my students to be able to easily view their English language learning course materials on their mobile devices*, student mean scores ( $M = 5.04$ ,  $SD = 1.81$ ) were significantly lower than the means scores of faculty members ( $M = 5.58$ ,  $SD = 1.31$ ). Accordingly, faculty members were in stronger agreement than were students for this survey item. For the item, *I would like to / I would like my students to be able to take quizzes for their English language learning on their mobile devices*, student mean scores ( $M = 4.95$ ,  $SD = 1.86$ ) were significantly higher than the mean scores of faculty members ( $M = 4.29$ ,  $SD = 2.17$ ). Students therefore were in stronger agreement than were faculty members for this survey item.

## 5. Discussion

Each of the research questions will now be discussed in turn.

*RQ1: Are ownership patterns of mobile devices similar for students and faculty members?*

Ownership patterns for students and faculty members were not similar. Students had higher levels of ownership of newer smartphones - with the added functionality associated with these devices - than did faculty members. Overall, 90% of students had access to either a smartphone or a tablet PC compared with 77.5% of faculty members. These ownership patterns were similar to those reported previously by Baker et al. (2012), where student mobile device ownership was greater than faculty member ownership, thus implying that proportionally less faculty members than students are able to take full advantage of the affordances of these more sophisticated mobile devices to support their EFL teaching. The differential in mobile device ownership patterns between students and faculty members may be manifesting itself in a variety of ways, particularly in the form of identified differences between student and faculty member skill levels concerning computers, the Internet and mobile devices, as discussed next.

*RQ2: Are there any significant difference between students' and faculty members' computer, Internet and mobile device skills?*

Faculty members believed themselves to be more skilled than students in a range of computing and Internet skills. Computing skills of faculty members were significantly higher than those of students regarding playing digital files without accessing the Internet and managing/manipulating digital photos. With regard to Internet skills, faculty members were significantly more skilled than students in making phone calls via Skype, looking up reference information for study purposes, sending or receiving emails, and buying and selling things online.

In contrast, students were significantly more skilled than faculty members in a range of mobile device skills involving sending texts and SMSs, downloading games or applications from the Internet, and sending pictures or movies to other people. These results suggest that students are more skilled in the newer technologies characterised by mobile devices, while faculty members are more confident using the relatively 'older' technologies such as computers and the Internet. In a previous study, faculty member daily use of computers was found to be higher than student daily use, while student daily use of mobile devices was higher than faculty daily use (Baker et al., 2012). This result might explain the difference in skills among faculty members and students in the current context. Faculty members, who use computers more often, have a higher skill level than their students. Similarly, students, being more frequent users of mobile devices than faculty members, accordingly have higher levels of mobile device skills.

With regard to Internet skills, it may be the kinds of activities that were surveyed being responsible for the significant differences identified between students and faculty members. This may also be evidence of the more frequent use of mobile devices by students and of computers by faculty members. Many of the Internet skills surveyed were either practices performed generally using computers (for example, phone calls via Skype) or practices typically preferred by older users. For example, in terms of preference for communication technologies, Roblyer, McDaniel, Webb, Herman and Witty (2010) found that faculty members were significantly more likely than students to use 'traditional' technologies such as email. The higher Internet skills reported by faculty members are possibly due to the nature of the surveyed skills being more common computing applications and those preferred by older users such as faculty members.

Mac Callum and Jeffrey (2013) noted the influence of skill and experience on the adoption of mobile devices as tools to support learning. Similarly, users with significant levels of experience with mobile devices will be both comfortable using these devices for learning and better able to see the benefits they offer in supporting learning (Mac Callum & Jeffrey, 2013). In the current context, it might be expected that students, being more skilled in the use of mobile devices than faculty members, should be more comfortable and hence use mobile devices more readily in their learning. Conversely, faculty members, being better versed in the use of

relatively older technologies such as computers and the Internet, may be less comfortable in using mobile devices to support their teaching. While such differences in skill levels have the potential of causing faculty members' attitudes towards the use of mobile devices in English language learning to be different to their students, the results discussed next suggest that this was not the actual case.

*RQ3: Are there any significant differences between students' and faculty members' attitudes towards using mobile technology in English language learning?*

Despite, faculty members being less skilled in the use of mobile devices than their students, this did not appear to influence their attitudes towards the use of mobile devices in English language learning. Results indicated that both student and faculty member attitudes towards using mobile technology in English language learning were generally positive, with students and faculty members holding similar attitudes in this area.

The two survey items for which both students and faculty members remained uncertain (i.e., neither agreed nor disagreed) - *I believe that it would take me longer to accomplish English language learning tasks using a mobile device* (students:  $M = 4.04$ ,  $SD = 1.87$ ; faculty:  $M = 4.19$ ,  $SD = 1.70$ ) and *I think it might take me a while to get comfortable with using a mobile device for English language learning/teaching* (students:  $M = 4.25$ ,  $SD = 1.83$ ; faculty:  $M = 4.08$ ,  $SD = 1.65$ ) - may be explained by the contextual factors at the study site. Currently, the use of mobile devices for teaching and learning has not been formally adopted at the university. Accordingly, both students and faculty members found it difficult to judge both whether the adoption of mobile devices would be an efficient use of their time and whether they would be comfortable in using such devices.

*RQ4: Are there any significant differences between students' and faculty members' future intentions to use mobile devices in English language learning?*

Similar to Al-Emran et al.'s (2016) findings, results from the current study suggest that faculty members are becoming increasingly predisposed to the use of mobile devices in the classroom. Results show that for the majority of survey items of future intentions to use mobile devices in English language learning, faculty members expressed similar sentiments to students. However, relatively low overall means for both students and faculty members suggest that a degree of uncertainty about the use of such devices remains. Similar to a degree of uncertainty for a number of items regarding attitudes towards the use of mobile devices in English language instruction, this might be explained by a lack of familiarity of both students and faculty members with the use of mobile devices in English language learning.

Two points of difference were noted between students and faculty members. First, for the survey item *I would like to / I would like my students to be able to easily view their English language learning course materials on their mobile devices*, student mean scores were significantly lower than faculty member mean scores (students:  $M = 5.04$ ,  $SD = 1.81$ ; faculty members:  $M = 5.58$ ,  $SD = 1.31$ ). Students were less enthusiastic than faculty members about using their mobile devices to view their course materials. Given that mobile devices have not been formally embraced at the study site course materials would not yet have been optimised for mobile devices. Accordingly, students might still believe that viewing course materials would be best done on either laptop or desktop computers rather than on mobile devices.

Regarding the second item, *I would like to / I would like my students to be able to take quizzes for their English language learning on their mobile devices*, student mean scores were significantly higher than the mean scores of faculty members ( $M = 4.95$ ,  $SD = 1.86$ ;  $M = 4.29$ ,  $SD = 2.17$ ). Here, students were more enthusiastic than faculty members about this survey item. The interactive nature of quizzes might appeal to students, who are more familiar with interacting with mobile devices, and is something they might perceive to be useful in their English language learning. Such perspectives align with the view of Domitrek and Raby (2008) that students find mobile devices to be more fundamentally useful in instruction than do their teachers.

## 6. Summary and Conclusions

The main findings of the study can be summarised as follows.

- Student and faculty ownership of mobile devices were not similar. Students had a higher level of ownership of newer smartphones than did faculty members.
- Differences were found between student and faculty member computing, Internet and mobile skills. Faculty members believed themselves to be more skilled than students in a range of computing skills and Internet skills, while students were more skilled than faculty members in a range of mobile device skills.
- Although faculty members were less skilled in the use of mobile devices than were students, this did not influence faculty members' attitudes towards the use of mobile devices in English language learning.
- The level of mobile device skills did not appear to influence students' and faculty members' future intention to use mobile devices in English language learning, despite possessing differing levels of mobile device skills, indicating similar levels of future intention to use mobile devices.
- Despite a few areas of uncertainty, faculty members, like their students, appeared reasonably well-disposed to the use of mobile devices in English language learning at the study site.



This study confirms previous results and draws into question others. First, differences in ownership patterns of mobile devices between students and faculty members identified previously (see Baker et al., 2012) persist, with students in the current study showing higher ownership levels than faculty members of newer smartphones. Second, results suggest that the effect of skills and experience on the adoption of mobile devices as tools to support learning appears not to be as influential as previously identified (Mac Callum & Jeffrey, 2013). Faculty members, despite not being as skilled as students in using mobile devices, nevertheless displayed positive attitudes towards their usage and a similar level of willingness as students in adopting mobile devices.

Given that the study site where the research was conducted has not formally introduced the use of mobile devices to support English language learning, results suggest that the formal introduction of mobile devices as tools of instruction would be positively received by both students and faculty members. Results also indicate that both students and faculty members appear to have sufficient levels of mobile device skills and positive attitudes towards mobile devices, and while there exist levels of uncertainty in some areas, these can largely be explained by unfamiliarity with the application of mobile devices in an English language learning context.

This study has a number of limitations. First, data were collected from a single study site. Research should be broadened to a range of study sites to determine the generalisability of the results presented and the reliability of the conclusions drawn. Second, as is common in Saudi Arabian contexts, the university study site is segregated according to sex. The study only explored the skills and perspectives of male students and male faculty members. The perspectives of female students and female faculty members also need to be canvassed to improve the generalisability of the results and to account for any differences that may be due to gender factors. Third, the computer, Internet and mobile device skills explored in the study could be considered basic skills and therefore the study may not have effectively differentiated the various skill levels of the two study cohorts. Exploration of medium- and higher-level computer, Internet and mobile device skills could help highlight more significant differences in skill levels between students and faculty members.

One recommendation for future research is to determine whether the lack of influence of mobile device skills and experience on future intention to use technology identified by this research is simply a manifestation of the particular study site or is a broader effect that has arisen, possibly due to the increased ubiquity of mobile devices in both educational institutions and the broader community.

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