AN INVESTIGATION OF THE FACTORS THAT PREDICT UNIVERSITY INSTRUCTORS’ INTENTIONS TO ADOPT SOCIAL MEDIA INTO THEIR TEACHING

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ABSTRACT

This study identifies the factors that affect faculty members’ intentions to use social media tools in their teaching activities at the Imam Abdulrahman Bin Faisal University (IAU). Based on the Decomposed Theory of Planned Behavior (DTPB) model, which was designed on a quantitative approach, the study indicates that attitude and subjective norms are significant predictors for faculty members’ intentions to integrate social media into their teaching, but the perceived behavior control is not a significant factor. The results also show that there was no significant difference in faculty members’ intention to adopt social media for teaching purposes that could be attributed to their gender, nationality, or academic ranks. However, there was a significant difference in faculty intentions between those who teach in Arts and Education colleges and faculty members who teach in Health colleges. Specifically, faculty in the Arts and Education colleges show more significantly intentions to use social media than those in the Health colleges.

Keywords: social media, faculty members, acceptance, dtpb, adopting, teaching

INTRODUCTION

Besides recent advancements and revolutions in technology and its application, students today are considered to be part of a “net generation” (Van Eck, 2006, p. 17); that is, they are very familiar with technology and its uses (Allam & Elyas, 2016). As Prensky stated,

our students are no longer “little versions of us,” as they may have been in the past. In fact, they are so different from us that we can no longer use either our 20th-century knowledge or our training as a guide to what is best for them educationally (2006, p. 9).

Nowadays, almost all college students rely on technology in their lives (Al Subeh, Alali, & Awaisu, 2018; Alqahtani & Issa, 2018; Alshammari et al., 2017; Boahene, Fang, & Sampong, 2019; Yakin & Tinmaz, 2015). Therefore, instructors can take advantage of students’ familiarity with information technology and leverage it to enhance digital student learning (Alghamdi, 2017).

One technology in widespread use among college students is social media. Social media refers to “a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content” (Kaplan & Haenlein, 2010, p. 61). Social media has substantially improved communication, socialization, and learning among individuals, organizations, and communities (Aifan, 2015; Allam & Elyas, 2016; Alshammari et al., 2017; Al Subeh et al., 2018). Participating in social media such as YouTube, Twitter, Facebook, Snapchat, WhatsApp, and Instagram has become a part of people’s daily lives. Given that social media tools are prevalent among college students and they
spend a considerable amount of time using them (Alqahtani & Issa, 2018; Gülbahar et al., 2017; Li & Pitts, 2009), instructors have to investigate whether there is a chance to integrate these tools into their teaching (Allam & Elyas, 2016; Zelick, 2013). Using these tools will provide instructors with new avenues to reach their students in these online environments in order to create learning communities. Further, Al-Otaibi and Houghton (2016) concluded that social media tools are the most beneficial Web 2.0 tools for enhancing the interactions among students and between students and faculty. Embracing social media to enhance teaching instruction will meet the interests, needs, and experiences of this digital generation.

Given this, institutions are requiring faculty members to integrate social media technologies into traditional instruction as supplemental tools to meet students’ expectations (Al-Otaibi & Houghton, 2016; Alshammari et al., 2017). So, universities have to prepare their faculty to successfully implement social media in their pedagogy to teach this digital generation. In order to “predict, explain, and increase user acceptance” (Davis et al., 1989, p. 982), it is imperative to understand factors that can enable or hinder Saudi university faculty members when embracing social media technologies in teaching. Indeed, identifying influential factors will “provide practitioners with sound guidelines for deployment and training” (Gribbins et al., 2007, p. 752). However, according to Alasfor (2016), there is a significant gap in the literature in regard to understanding the factors that contribute to adopting or rejecting the use of social media in pedagogy, particularly in Arab countries. Several researchers have indicated that there has been little research thus far examining the adoption of social media platforms in classrooms among higher education institutions in Saudi Arabia (Alqahtani & Issa, 2018; Alsurehi & Al Youbi, 2014; Chaurasia, 2011). Most of the studies that discuss incorporating social media in pedagogy have been related to Western countries (e.g., Magro, Sharp, K. Ryan, & S. Ryan, 2013; Mbohila, Ndebele, & Muhandji, 2014; Zawacki-Richter, Műskens, Krause, Alturki, & Aldraiweesh, 2015). Because of the differences between the culture and educational systems in Western and Arab societies, the findings of these studies may not be generalizable to Saudi universities (Stanger et al., 2017). So, this quantitative study used the decomposed theory of planned behavior (DTPB) framework to determine the key factors that impact the intentions of the faculty members at Imam Abdulrahman Bin Faisal University (IAU) toward integrating social media tools in their teaching.

The results of this study will benefit policymakers, administrators, and technology coordinators at the IAU and other local universities and support the motivational factors and eliminate or reduce the inhibitory factors that lead to more adoption of social media. It will diagnose the main reasons that faculty members are not using social media. This will help the university build more effective instructional curricula as this study will reveal deficiencies in the current university system, which may lead university policymakers to take actions to increase the use of social media in classrooms by instituting new policies that educators should use social media, providing intensive training on how to use social media, or developing infrastructure in the university.

**RESEARCH QUESTIONS**

The study is attempting to answer the following two research questions:

- What factors best predict a faculty member’s intention to use social media tools in their teaching?
- Do gender, nationality, age, academic rank, and college of the faculty member cause statistical differences in their intentions to use social media tools in their teaching?

**LITERATURE REVIEW**

There are several researchers who advocate for more adoption of educational technologies such as social media in higher education in order to meet students’ technological expectations and to improve student learning (Al-Otaibi & Houghton, 2016; Bennet et al., 2008; Gülbahar et al., 2017; Prensky, 2001). This would give students an active role in their learning process by providing them with new opportunities to participate in the class, discuss interesting topics, and collaborate with other students. Moreover, faculty could use social media communication tools such as Skype or Google Hangout in classrooms to let students participate in a voice or video call with domain experts (Alghamdi, 2017; Dabbagh & Reo, 2011).
Also, some faculty might use Twitter or Facebook to engage students in discussions or share important concerns related to lessons or the course in general (Alghamdi, 2017), while others might use wikis to enhance student writing and collaborative learning by asking students to work in groups to build their own projects (Dabbagh & Reo, 2011).

One advantage of using social media tools is that they play a significant role in creating an active learning environment (Gülbahar et al., 2017; Kelm, 2011). Adopting social media for education provides a great opportunity for students and instructors to produce their own content and share it within groups who hold similar interests. Participation and collaboration in creating or sharing knowledge on social media support the idea of knowledge construction, in which students improve their learning together (Kelm, 2011). Furthermore, embracing social media in teaching provides a great chance for students to develop their 21st century skills such as communication (Al-Khalifa & Garcia, 2013; Bartosik-Purgat et al., 2017; Gülbahar et al., 2017), critical thinking (Manan et al., 2012), and collaboration (Chen & Bryer, 2012; Gülbahar et al., 2017). Moreover, using social media in academic settings supports long-term retention of class information and achieves profound comprehension of course content (Chen & Bryer, 2012). As research has shown, students who use social media for their classes are able to transfer what they have learned to their friends out of class; therefore, this process of connecting information will enhance their learning (Tarantino et al., 2013). For these benefits, social media could be adopted in teaching and learning (Alqahtani & Issa, 2018; Boahene et al., 2019; Gülbahar et al., 2017). However, it is important to understand the factors that could affect the adoption of social media in university courses.

**Influential Factors Associated with the Use of Social Media for Learning**

The literature has shown that there are many different factors that influence the use of technology for learning. These factors are either related to the adopter, the society, the institutional environment, or innovation. The following literature only focuses on those factors that might affect the adoption of social media in both Arab and non-Arab countries.

**Factors Affecting the Use of Social Media Relevant to Non-Arab Countries**

Echeng and Usoro (2014) examined seven factors that could impact the acceptance and usage of Web 2.0 applications for supplemental teaching in Nigeria and Scotland. The proposed factors were adopted from three different common models for adopting information technology, including the theory of reasoned action (TRA), the technology acceptance model (TAM), and the unified theory of acceptance and use of technology (UTAUT). The researchers selected motivation to use (MTU) from TRA, perceived usefulness (PU) and perceived ease of use (PEOU) from TAM, and performance expectancy (PE) and facilitating conditions (FC) from UTAUT. Social influence (SF) was selected from TAM and UTAUT. The researchers also adopted one factor, prior knowledge (PK), based on an analysis of interviews that were conducted with five faculty members and 16 students. Data were collected from 279 participants (78 faculty members and 201 students) from a Scottish university via an online questionnaire, while a paper-based version was administered to 317 participants from five different universities in Nigeria. The results suggested that all seven factors had significant positive correlations with behavioral intention in the Nigerian universities and the Scottish university, except for the MTU, which had insignificant correlation with behavioral intention in Nigerian universities. The researchers attributed this insignificant correlation to the limited availability and use of learning management systems that have integrated social media tools in Nigerian universities. Lastly, the use of Web 2.0 platforms was significantly predicted by behavioral intention.

Ajjan and Hartshorne (2008) evaluated college faculty’s perceptions of the potential benefits of embracing Web 2.0 platforms as supplemental tools for promoting student learning. Utilizing the DTPB model, the study sought to determine the most influential predictors that affect faculty members’ intentions to adopt Web 2.0 technology. This study included 136 faculty members who completed a survey at one university in the southeastern United States. The results showed that few faculty members used Web 2.0 tools to supplement their teaching practices, even though many of them realized the pedagogical potential
of these tools in enhancing student learning. Also, the findings showed that faculty attitudes toward using Web 2.0 tools and their perceived behavior control level were the most important factors in predicting faculty members’ intentions for adopting Web 2.0 tools.

In another study that examined faculty adoption of social media, Cao and Hong (2011) focused on the determinants of using social media tools among faculty members. They used observations, interviews, and a questionnaire for collecting data from 248 faculty members at a private university. Using the Pearson correlation coefficient, their results suggested that there are three factors that have a significant positive correlation with the use of social media: individual competency; expected advantages; and students, peers, and administrators’ expectations about faculty adoption of social media. Furthermore, perceived risks, such as the usage being time consuming or the loss of privacy, were a significant factor that had a negative significant correlation with the use of social media.

In 2013, Cao, Smith, and Hong conducted another study examining factors that could facilitate and hamper faculty members’ intention to use Web 2.0. The main purpose of this study, besides identifying motivational factors, was to validate the theoretical framework designed by Cao and Hong (2011). The researchers surveyed 249 faculty members (123 male and 126 female) and interviewed another 12 faculty members at a private university in the Pacific Coast area. Using principal component analysis, the researchers came up with six factors that accounted for 68% of the variation, which comprised individual readiness; expected advantage; perceived risks; teaching confidence; social pressure from students, colleagues, or administrators; and future professional requirements. The results indicated that faculty members’ awareness of using social media was the most influential factor for the decision to adopt it. Furthermore, pressure raised by another professor who successfully adopted social media positively influenced other professors’ decisions to use social media. Moreover, expected advantage played an important role in facilitating professors’ acceptance to use social media; however, the potential consequence of risks hindered the process of adoption. In addition, since social media tools have been widely used, it was essential to take into consideration the future employability of the student when adopting social media. It is interesting to note that while students, colleagues, and administrators had some impact on a professor’s decision to adopt social media, the professors showed stronger motivations to meet their students’ and peers’ expectations than to meet those of their administrators.

Alsadoon (2018) also examined the impact of perceived usefulness, perceived easiness, prior knowledge, pedagogical support, perceived risk, and peers on faculty members’ decisions to use online Web applications such as social media for learning. A total of 249 faculty members from different colleges of education in the United States were selected randomly to fill out an online survey. Using hierarchical multiple regression, the results suggested that having prior knowledge and experience in using Web applications ($\beta = .5$) and perceiving the benefits of using these applications for learning ($\beta = .3$) were the only significant predictors of faculty members’ behavioral intentions.

Focusing on a slightly different population, Sadaf, Newby, and Ertmer (2012) chose to study educational technology preservice teachers at a Midwestern university. They conducted this study using the DTPB to investigate factors that influence the behavioral intentions of preservice instructors to adopt Web 2.0 technologies in their teaching. They also aimed to discover how preservice teachers perceive embracing social media platforms for an instructional purpose. The researchers interviewed eight instructors and distributed a questionnaire to 286 preservice teachers (196 female and 90 male). The findings stated that attitude ($\beta = 0.74$) and perceived behavior control ($\beta = 0.1$) were significant determinants for the preservice teachers’ intention to use Web 2.0 tools, with attitude having the highest impact. However, the teachers’ subjective norm was not significant ($\beta = 0.04$). This model accounted for 75.5% of variation in behavioral intention. Specifically, teacher attitude was significantly predicted by perceived usefulness ($\beta = .596$), compatibility ($\beta = 0.198$), and perceived ease of use ($\beta = 0.16$). Student influence ($\beta = .36$), superiors’ influence ($\beta = .353$), and peer influence ($\beta = .182$) had positive impacts on teachers’ subjective norms. Perceived behavior control was mainly influenced by self-efficacy...
Therefore, the researchers found that when teachers have positive attitudes toward using Web 2.0 tools and have the resources and skills to integrate them into learning, they are more likely to use them. Also, the findings indicated that the majority of the preservice teachers felt that using Web 2.0 was very useful for students and that blogs, wikis, and social networking websites were the most useful tools for educational purposes.

Factors Affecting the Use of Social Media Relevant to Arab Countries

So far, there has been relatively little research in Arab countries on which factors affect the use of social media, with only three studies (Alasfor, 2016; Almeshal 2013; Alrayes & Ali, 2016) found after an extensive search of the available literature. Alrayes and Ali (2016) carried out a study to determine the most significant factors for the acceptance and use of social media among college instructors in the Kingdom of Bahrain. The TAM model was adapted to include the following factors: perceived risk (PR), perceived benefits (PB), performance expectancy (PE), and subjective norm (SN). PR was decomposed into privacy, security, and trust, while PB was decomposed into perceived usefulness (PU), perceived ease of use (PEOU), and enjoyment (E). The researchers used an online survey that was distributed to randomly selected instructors in private universities and received 134 responses. To ensure the validity and reliability of the instrument, the researchers used exploratory factor analysis and Cronbach’s alpha. Four items were excluded from the hypothesis test (three items related to PEOU and one item related to E) because their factor loading values were less than .5. The Cronbach’s alpha values of factors were greater than .53. The results revealed that 59% of instructors used at least one Web 2.0 tool in their teaching, with Blackboard the most commonly used at 40%. Linear regression was employed to test the significance of the factors. Based on regression results, security had a significant effect on PR ($\beta = .352, p < .05$), while privacy and trust had no significant effect. While both E and PEOU had an insignificant effect on PB, PU had a significant effect ($\beta = .413, p < .05$). PB, PE, and SN were found to significantly affect behavioral intention (BI) ($\beta = .346, p < .05, \beta = .194, p < .05,$ and $\beta = .32, p < .05$), but PR did not ($\beta = .006, p > .05$). Finally, BI had a significant effect on the actual use of Web 2.0 tools ($R = .393$).

Utilizing the diffusion of innovation theory, Alasfor (2016) surveyed 384 faculty members (200 female and 184 male) across all Saudi public universities (N = 28) to explore their acceptance of using social media for educational purposes. Using logistic regression, the model was able to explain 61% of variation in faculty members’ decisions. The majority of participants (n = 336) presented a strong intention to use social media for promoting students’ learning. Compatibility ($p = .000$), followed by perceived relative advantage ($p = .000$), were the significant factors that influence faculty members’ intentions, while complexity ($p = .057$), trialability ($p = .629$), and observability ($p = .856$) were not significant at the .05 level. Moreover, the researchers concluded that there were no significant differences in faculty members’ decisions to utilize social media that could be attributed to gender or age.

Using the modified version of the DTPB, Almeshal (2013) examined the factors that affect faculty members’ acceptance and adoption of social media for learning by comparing faculty members’ behavioral intention and integration of social media in their teaching practice at King Saud University (KSU) in Saudi Arabia and Reading University (RU) in the United Kingdom. A total of 84 faculty members from KSU and 35 faculty members from RU completed an online survey. In order to assess the survey’s reliability, Cronbach’s alpha was used, with alpha values ranging from .68 to .946. Using path analysis, the findings showed that attitude ($\beta = .314$ for RU and $\beta = .331$ for KSU), the use of social media in daily life ($\beta = .31$ for RU and $\beta = .204$ for KSU), and perceived behavior control ($\beta = .29$ for RU and $\beta = .208$ for KSU) were significant factors in predicting faculty members’ behavioral intentions in both universities. However, subjective norm was only significant in predicting faculty members’ behavioral intention at Reading University ($\beta = .255$ for RU and $\beta = .075$ for KSU). Since the influential factors were almost similar in both universities, the researchers concluded that cultural differences have a limited effect on social media adoption. Finally, Almeshal recommended the DTPB model as a useful model in predicting factors that could have an impact on people’s opinions toward adoption of technological innovation.
The Influence of Saudi Cultural Factors on Adopting Social Media

It is important to understand the Saudi cultural context as it might impact adopting social media in Saudi universities (Stanger et al., 2017). Saudi society has many characteristics that are different from other societies (Alghamdi, 2017). Hofstede and Hofstede (2005) defined culture as “the collective programming of the mind that distinguishes the members of one group or category of people from others” (p. 4). This programming constitutes an individual’s beliefs, behavior, perceptions, and values (Obeidat et al., 2012). The influence of cultural values in accepting technology varies from one country to another. In order to obtain a profound understanding of the factors that could be enablers or hindrances of faculty adoption of new technology, the impact of cultural factors should be taken into consideration (Bartosik-Purgat et al., 2017; Erumban & De Jong, 2006; Obeidat et al., 2012; Sukkar & Hasan, 2005). Factors that impact the use of technology in Western countries differ from those that affect Middle Eastern countries because of the cultural differences between communities (Stanger et al., 2017). Cultural factors that have important contributions in constituting community culture include religion, language, and education (Sukkar & Hasan, 2005).

According to Askool (2012), “Saudi society is considered as very conservative community” (p. 215). In Saudi Arabia, tradition and values play a critical role in people’s lives, including social lives and educational communication practices (Alamri, 2016; Alghamdi, 2017; Alqahtani & Issa, 2018; Stanger et al., 2017). Since this study is related to Saudi Arabia, it is imperative to understand the Saudi cultural values that might influence the adoption of social media. Askool investigated the effect of cultural restriction on Saudi people’s attitudes, motivation, behavioral intention, and usage of social media. A total of 600 Saudi users of social media filled out an online survey with 362 providing valid responses. Using a structural equation modeling technique, the researcher found that cultural restrictions had a significant influence on behavioral intention ($\beta = .786$), intrinsic motivation ($\beta = .737$), attitude ($\beta = .731$), and extrinsic motivation ($\beta = .482$). Askool also found males more active in using social media than females, which she attributed to cultural concerns that women have regarding the use of social media in Saudi Arabia. Also, females prefer to hide their family names, while males are more likely to use social media under their real names. Further, the results indicated that privacy risks, information quality, and internet speed are the main barriers to using social media in Saudi Arabia.

With that said, it is likely that Saudi cultural specificity has an impact on the use of social media. Alsuraihi and Al Youbi (2014) argued that because of the cultural specificity of Saudi society and its gender-segregated education system, the integration of social media among Saudi higher education institutions is limited when compared to Western countries. One cultural aspect is maintaining the privacy of women, which can be seen in the educational system and is a reason that contributes to gender segregation in universities and schools. Educational institutions use gender segregation to help women succeed in academics by giving them more freedom while maintaining their privacy. However, social media in education may pose risks for keeping the privacy of women by exposing them to social media platforms, especially in the absence of ethical guidelines for using social media for learning in Saudi Arabia (Alsuraihi et al., 2016). As a result, those in academia and/or their families may not heavily use various kinds of social media.

While looking at Saudi culture through the lens of cultural dimensions, Hofstede (n.d.) found that Saudi people achieve a low score on the individualism dimension (25 out of 100), which means the Saudi people are a collectivistic society, and that they value establishing interpersonal relationships. Using social media supports this characteristic of Saudi people, because the use of social media plays a key role in facilitating communication among members of a community. Also, in collectivist societies, people gather together and show high respect for each other; therefore, it is likely during these gatherings that influential people impact other people’s intention to perform a behavior such as using social media (Al-Gahtani et al., 2007). People’s intentions in countries with low individualism scores in Hofstede’s cultural scale, such as Saudi Arabia, are strongly impacted by subjective norms toward accepting technology (Al-Gahtani et al., 2007).

Also, Hofstede (n.d.) found that Saudi people have a high score (95) on power distance.
Power distance refers to “a measure of the interpersonal power or influence between B [boss] and S [subordinate] as perceived by the S” (Hofstede & Hofstede, 2001, p. 83). As a result, people in Saudi Arabia are expected to conform to other people who are in superior social roles. In the context of acceptance of technology, Al-Gahtani et al. (2007) argue that the intentions of people who belong to a culture with a high power-distance are more likely to be influenced by subjective norms. Therefore, it is expected that faculty members at the Imam Abdulrahman Bin Faisal University would show high levels of adoption of social media in their academic practice when they are told to use these tools by their department chair or the dean of the college.

THEORETICAL FRAMEWORK

This study uses DTPB, which is an extension of the theory of planned behavior (TPB), as grounded theory (Ajzen, 1991). Based on the TPB, a person’s behavior can be predicted by his or her intention toward the behavior, and behavioral intention is determined by three basic factors including the person’s attitude, social influence (or subjective norm), and behavioral control (Ajzen, 1991). TPB has underlying belief structures that are integrated into a unidimensional construct (Taylor & Todd, 1995a). For example, the attitude component in TPB is a combination of behavioral beliefs and an evaluation of the desirability of the consequence. Similarly, the subjective norm and perceived behavior control have the same combination of beliefs. This combination of beliefs has been vulnerable to many criticisms (Taylor & Todd, 1995a). For example, unidimensional beliefs might not steadily correlate to attitude or subjective norms (Bagozzi, 1981; Shimp & Kavas, 1984). To illustrate, according to Rogers (2003), adopting an innovation depends on several factors, including perceived usefulness, ease of use, and compatibility. There is a possibility that an individual has a different evaluation for each one of these three constructs. Therefore, treating these three factors as a singular belief construct would obscure the amount of influence each factor has on attitude (Taylor & Todd, 1995a).

In order to achieve a better understanding of the belief structures’ influence, several researchers advocated for decomposing these beliefs structures into multidimensional constructs (Taylor & Todd, 1995a) because treating beliefs structure as a single structure may lead to invalid results (Bagozzi, 1981). According to Taylor and Todd (1995a), decomposing structural beliefs into specific salient beliefs provides several benefits. Unlike a single beliefs structure, it makes the relationships between these constructs and the antecedents of intention clearer and easier to understand (Taylor & Todd, 1995a), and it produces more specific details and a better understanding of the influence of specific factors on an individual’s behavioral intention and behavior, as well as the extent to which these factors are correlated (Hartshorne et al., 2010; Osorio & Papagiannidis, 2014; Taylor & Todd, 1995a), and therefore increases the explanatory power of the investigated behaviors (Osorio & Papagiannidis, 2014; Taylor & Todd, 1995b). The DTPB provides a higher (although still moderate) increase of explanation of individual behavioral intention than TPB does (Osorio & Papagiannidis, 2014; Taylor & Todd, 1995a). Additionally, decomposing a beliefs structure leads to having constant sets of beliefs structures that can be used across different settings (Taylor & Todd, 1995a).

So, the DTPB model was designed to investigate the factors affecting behavior based on one’s intention. This theory depends on intention to predict whether an individual will perform a behavior. In this study, intention is employed as a dependent variable, much as it has been in many previous studies (Ajjan & Hartshorne, 2008; Osorio & Papagiannidis, 2014; Taylor & Todd, 1995b). DTPB was also widely employed to explore influential factors that affect peoples’ intentions and usage of social media. Several studies demonstrated that the DTPB model is valid and robust in predicting college faculty members’ and students’ intentions toward using social media for learning (Ajjan & Hartshorne 2008; Al-Otaibi & Houghton 2016; Almeshal, 2013; Dougherty, 2015; Lin, 2007; Macredie & Mijinyawa, 2011; Osorio & Papagiannidis; 2014; Renda dos Santos & Okazaki, 2016; Sadaf, 2013; Smarkola, 2008).

Behavioral Intention

Intentions “are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior” (Ajzen, 1991, p. 181). When individuals have strong intentions to perform a behavior, they are more likely
to perform that behavior (Ajzen, 1991). According to Ajzen (2005), there is usually a significant relationship between behavioral intention and actual behavior, even though the relationship may be relatively low. Ajzen (2005) stated that intention is the most significant determinant for predicting human behavior. This finding is similar to many other studies’ findings that used intention as a predictor for actual behavior (Ajjan & Hartshorne, 2008; Alrayes & Ali, 2016, Echeng & Usoro 2014).

**Attitude**

Attitude is defined as the extent to which an individual favors or does not favor using technology (Taylor & Todd, 1995a). As mentioned above, attitude toward usage is one determinant of individual behavior. For the purpose of this study, attitude refers to the extent that faculty desire to integrate social media platforms into their pedagogical practices. There are several empirical studies that demonstrate the positive relationship between attitude and behavioral intention to use technology (Ajzen & Fishbein, 1980; Taylor & Todd, 1995a). Attitudinal beliefs are decomposed to three different determinants, including relative advantage, complexity, and compatibility. These three constructs are adopted from the diffusion of innovations theory (Rogers, 2003). To begin with, relative advantage is defined as the extent to which an individual perceives that innovation is better than what it will be replacing. This can be measured by economic benefits, satisfaction, and convenience (Rogers, 2003). According to Rogers (2003), the more that individuals perceive a technology to be useful, the more likely they will use that technological innovation. In this study, relative advantage reflects the degree to which faculty members at IAU believe that integrating social media technologies into their teaching will promote student learning.

The second determinant of an attitude is complexity, which refers to the extent to which innovation is perceived to require much in the way of labor or skills to understand or use (Rogers, 2003). People have a greater tendency to use innovation that they think will be easy to use and understand (Rogers, 2003), so it is expected that complexity will adversely affect an individual’s attitude. According to Davis (1989), several researchers found that attitude is predicted by the perceived ease of use, and in turn, perceived ease of use plays an important role in determining an individual decision toward adopting new technology (Davis, 1989). For the purpose of this study, we defined the perceived ease of use of social media websites as the extent to which faculty members in the IAU believe that using particular social media websites requires less effort. Social media technologies that are perceived to need less effort to adopt are more likely to be accepted by potential users (Hartshorne et al., 2010).

The last determinant of attitude is compatibility. Compatibility is defined as “the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters” (Rogers, 2003, p. 15). Many researchers have found that compatibility impacts the individual adoption of specific technological innovations (Rogers, 2003), and it would be expected to be positively related with attitude. According to Tomatzky and Klein (1982), as long as an innovation is compatible with a potential adopter’s values and job responsibilities, it is expected to be accepted and used. However, when the adoption of the innovation violates the adopter’s cultural, educational, or religious values, the possibility of adopting this innovation would decrease (Rogers, 2003). In addition, when there is an urgent and immediate need to adopt an innovation, it is most likely to be adopted (Taylor & Todd, 1995a). In this study, compatibility reflects the degree to which university instructors feel that using social media will suit their teaching and learning responsibilities.

**Subjective Norm**

According to Taylor and Todd (1995a), the subjective norm reflects the different social pressures that affect the behavior of the individual. These pressures may come from various sources, such as family, friends, and administrators. Decomposing subjective norms will be informative if the referent group has different opinions about performing a behavior (Taylor & Todd, 1995a). However, in some cases, the referents are expected to have the same views. In this case, the decomposition would not add any additional understanding (Taylor & Todd, 1995a). In relation to this study, three different sources of social pressures may influence faculty members’ use of new technology, including students, peers, and superiors. With students’ familiarity toward and
tendency to use social media tools, they would be likely to encourage their faculty members to further integrate these tools into the teaching and learning process (Prensky, 2001). However, there may be some professors who do not believe in using social media networks in these ways; their opinions may impact their colleagues, thereby hindering the adoption of social media networks, although the inverse may be true as well. Additionally, some administrators believe the use of social media plays a vital role in enhancing students’ learning; therefore, they might become more supportive of the use of social media by asking professors to adopt these kinds of technology in their teaching.

**Perceived behavior control**

Perceived behavior control is defined as the degree to which individuals think they have control over particular behaviors (Ajzen, 1991). Taylor and Todd (1995b) decomposed this construct into two components that influence an individual’s perceived control: self-efficacy and facilitating conditions. Self-efficacy refers to the extent to which an individual is confident in his or her competence and ability to perform a specific behavior (Fishbein & Ajzen, 2011), and it has been shown to positively influence one’s behavior (Taylor & Todd, 1995b). The more self-efficacy potential an adopter has toward innovation, the more likely he or she will accept and use it. Facilitating conditions refers to the availability of the required resources that are needed to implement an innovation (Tyler & Todd, 1995b). The availability of resources needed may affect our intention, which will, in turn, affect our behavior. Previous findings have shown that facilitating conditions have positive and significant relationships with behavioral intentions and actual usage (Harsono & Suryana, 2014; Taylor & Todd, 1995b). However, a lack of facilitating conditions may negatively influence behavioral intentions and usage behavior (Taylor & Todd, 1995b). In the context of this study, self-efficacy refers to the extent to which faculty members are confident with their competence and ability to properly use social media websites in enhancing learning and teaching processes while facilitating conditions include the presence of the social media networks, money, policy, and time.

**METHODOLOGY**

This study investigated the relationship between multiple independent variables (i.e., attitude, subjective norm, perceived behavioral control) and one dependent variable (intention) to identify and understand the factors that encourage or hinder college faculty members’ intentions to embrace social media tools in their practices. In order to measure these variables operationally, we obtained permission to adapt Hartshorne et al.’s (2010) survey. The researcher replaced “Web 2.0” with “social media” to meet the purpose of this study. Also, we added some items regarding privacy risk that were adopted from Dinev and Hart’s (2003) study. Further, two items related to time and policy were added to the facilitating conditions resources factor. Moreover, three items were added to the section on technology facilitating conditions factors that are related to the availability of an internet connection, training on using social media, and technical support. Thus, the survey includes 37 items based on the DTPB model to determine the factors that most predict college faculty members’ intentions to embrace social media in their pedagogies. The respondents chose a number between 1 and 4 on a Likert-type scale to reflect their agreement with the statements.

In order to increase the content validity of the questionnaire and ensure that all items are clear and easily understood, we conducted two pilot tests for the instrument. First, the questionnaire was given to a group of individuals composed of doctoral students and professors in Instructional Technology. These individuals completed the questionnaire and provided comments and suggestions on ways to enhance the clarity of each question. Based on their feedback, we modified the questionnaire. While in the second pilot test, the study questionnaire was given to a small group of faculty members who teach in Saudi universities, asking them to fill it out and provide further comments and suggestions. It is worth mentioning that, to ensure that the questionnaire was accurately translated, the questionnaire was examined by two experts in instructional technology who are knowledgeable in instrument development and speak both English and Arabic.

After that, this modified and final questionnaire was used to collect the data from faculty members at the IAU. This includes all male and female faculty members, either Saudi or non-Saudi, and all academic rankings from teaching assistants to
professors at the IAU. The study data collection was conducted during the 2017-2018 academic year with help from the public relations unit in the university, which sent an email to all faculty members that included an invitation to participate and the link to the online survey. Also, we sent a follow-up personalized invitation to the faculty members two weeks after the invitation to increase the response rate.

The Validity of the Results

We used factor analysis to ensure structural validity (Hair et al., 2010; Ul Hadia et al., 2016). Factor analysis is considered an effective way to confirm the convergent and discriminant validity in the adopted instrument. Therefore, we conducted an Exploratory Factor Analysis (EFA). Principal Axis Factoring with Promax rotation was performed separately four times on the intention and its antecedents, attitude and its antecedents, subjective norm and its antecedents, and perceived behavior control and its antecedents. Any factor loading greater than .4 should be considered as a significant loading as suggested by Stevens (2009).

The first EFA included items that should represent the behavioral intention, attitude, subjective norm, and perceived control constructs. When specifying four factors, the results show that all items significantly loaded on the factors that they were supposed to be loaded on, except Item 1 ("I plan to use social media technologies in my classroom"). Item 1 significantly loaded on intention and attitude. After deleting this item and rerunning the EFA, all the items were loaded on the factors that they were supposed to be loaded on. The second EFA included all the items that were supposed to represent the predictors for attitude: perceived usefulness, perceived ease of use, and compatibility. When specifying three as the number of extracted factors, all items loaded on the factors they were supposed to be loaded on. The third EFA included all items that were supposed to predict subjective norms: student influence, peer influence, and superiors’ influence. All items significantly loaded on their factors. The fourth EFA included items that were supposed to represent the items for the predictors for perceived behavioral control. When specifying the number of extracted factors to four, all items significantly loaded on their factors. Regarding the content validity of the questionnaire, we conducted a pilot test for the instrument to ensure that all items were clear and easily understood.

In order to determine the reliability of the scores collected by the survey, we used Cronbach’s alpha to test the internal consistency of the survey items. Nunnally (1978) recommended using Alpha levels greater than .7 as the standard for acceptable Cronbach’s alphas. In this study, the Cronbach’s alphas ranged from .65 for perceived behavioral control to .95 for superiors’ influences. Twelve of the 14 constructs had Cronbach’s alphas greater than .7. However, facilitating resources (α = .65) and perceived behavioral control (α = .67) were below the recommended .7 threshold. One possible explanation for these low Cronbach’s alpha levels could be due to the number of items that represent the variables. More specifically, in this study, several constructs were represented by two (e.g., facilitating resources) or three items (e.g., perceived behavioral control). Field (2009) explains that having too few items representing constructs may sometimes result in low Cronbach’s alpha levels. Therefore, it is not unexpected that these constructs could have Cronbach’s alphas of less than .7. Although the facilitating resources (α = .65) and perceived behavioral control (α = .67) constructs have Cronbach’s alpha lower than the minimal generally-agreed upon levels (α = .7), some researchers argue that the Cronbach’s alpha may be relaxed to a lower threshold of .6 in exploratory research (Hair et al., 2010). Francis et al. (2004) suggested that a Cronbach’s alpha greater than .6 is acceptable for studies adopting the theory of planned behavioral framework. Also, Cohen, Manion, and Morrison (2007) indicate that a Cronbach’s alpha that is larger than .6 is marginally reliable. Moreover, Hinton, Brownlow, and McMurray (2004) state that a Cronbach’s alpha from .5 to .7 represents a moderate level of reliability. By using these arguments regarding minimally acceptable Cronbach’s alpha levels, all of the 14 constructs in this study suggest sufficient internal consistency. Table 1 shows a summary of the Cronbach’s alphas for all constructs.

**FINDINGS**

Out of the 361 faculty members who participated in this study, 249 (69%) were female and 112 (31%) were male. Regarding the nationality of the participants, 224 (62%) of the participants
were Saudi and 137 (38%) were not. Participant ages ranged between 24 and 65 with an average of 39.32 (SD = 9.2). Years of teaching experience ranged from .5 to 40 years with an average of 12.6 (SD = 9.08). With respect to academic rank, there were 42 (11.6%) teaching assistants, 121 (33.5%) lecturers, 135 (37.8%) assistant professors, 40 (11.1%) associate professors, and 23 (6.4%) professors. One hundred seventy-six (48.8%) of the faculty members were associated with Arts and Education colleges, 96 (26.6%) were associated with Sciences and Management colleges, 27 (7.5%) were associated with Engineering colleges, and 62 (17.2%) were associated with Health colleges.

In order to answer the first research question, we conducted multiple linear regression analyses based on the DTPB constructs. These analyses were conducted to determine the predictive power of participants’ attitudes, subjective norms, and perceived behavioral control in predicting faculty’s intentions to use social media in pedagogy. However, before conducting the regression analyses, we ensured that the assumptions of linear regression were met, which are normal distribution of the data, linearity in the relationship among the variables, homoscedasticity in the residuals, and no evidence of multicollinearity among the variables.

Regarding the results of behavioral intention regression, multiple regression results showed that the regression model was significant (F [3, 357] = 195.51, p < .05) with R2 and adjusted R2 = .62. This revealed that 62% of the variation in faculty members’ intentions was explained by this model as shown in Table 2. Using beta weights, we determined explaining the variability in intention. Table 3 shows that attitude was the strongest significant predictor for intentions (β = .66, p < .05). Subjective norm also had a significant impact on intention (β = .19, p < .05). However, perceived behavioral control was not a significant predictor for intention. As a result, the null hypothesis was rejected. In other words, at least one of the predictors accounted for a significant amount of variance in intention.

Since this research was exploratory in nature, we made further attempts to understand the factors

Table 1. Cronbach’s Alpha for All DTPB’s Constructs in the Questionnaire Based on Faculty’s Responses at IAU

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach’s Alpha</th>
<th>Number of Items</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superiors’ Influence</td>
<td>.95</td>
<td>2</td>
<td>2.61</td>
<td>.82</td>
</tr>
<tr>
<td>Intention</td>
<td>.93</td>
<td>2</td>
<td>2.72</td>
<td>.81</td>
</tr>
<tr>
<td>Student Influence</td>
<td>.93</td>
<td>2</td>
<td>2.76</td>
<td>.74</td>
</tr>
<tr>
<td>Perceived Usefulness</td>
<td>.91</td>
<td>5</td>
<td>2.09</td>
<td>.64</td>
</tr>
<tr>
<td>Compatibility</td>
<td>.91</td>
<td>2</td>
<td>2.79</td>
<td>.78</td>
</tr>
<tr>
<td>Privacy Risk</td>
<td>.91</td>
<td>3</td>
<td>2.77</td>
<td>.83</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>.90</td>
<td>2</td>
<td>2.50</td>
<td>.78</td>
</tr>
<tr>
<td>Attitude</td>
<td>.88</td>
<td>3</td>
<td>2.92</td>
<td>.69</td>
</tr>
<tr>
<td>Peer Influence</td>
<td>.83</td>
<td>2</td>
<td>2.57</td>
<td>.66</td>
</tr>
<tr>
<td>Ease of Use</td>
<td>.81</td>
<td>2</td>
<td>2.92</td>
<td>.66</td>
</tr>
<tr>
<td>Facilitating Technology</td>
<td>.80</td>
<td>3</td>
<td>2.54</td>
<td>.74</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>.79</td>
<td>2</td>
<td>2.90</td>
<td>.75</td>
</tr>
<tr>
<td>Behavioral Control</td>
<td>.67</td>
<td>3</td>
<td>3.06</td>
<td>.61</td>
</tr>
<tr>
<td>Facilitating Resources</td>
<td>.65</td>
<td>2</td>
<td>2.67</td>
<td>.72</td>
</tr>
</tbody>
</table>

Table 2. Summary of Regression Analysis for the Predictors Explaining the Responding Faculty Intentions

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.79*</td>
<td>.62</td>
<td>.62</td>
<td>.50</td>
<td>.821</td>
<td>195.51</td>
<td>3</td>
<td>357</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Note: Predictors: (Constant), Subjective Norm, Behavioral Control, Attitude
that affect attitude, subjective norm, and perceived behavior control. Thus, after conducting the intention regression, we conducted three other multiple regression analyses to identify factors that significantly predicted attitude, subjective norm, and perceived behavior control.

Regarding the results of attitude regression, predictors for attitude. These include perceived usefulness, ease of use, and compatibility. Thus, this regression analysis aimed to examine the predictive power for each one of these variables in predicting attitude. Multiple regression results showed that the regression model was significant (F [3, 357] = 372.04, p < .05) with R2 and adjusted R2 = .76. This revealed that 76% of the variation in faculty members’ attitudes was explained by this model as shown in Table 4. Using beta weights, we determined which predictors contributed to the explanation of attitude. Referring to Table 5, perceived usefulness was the strongest significant predictor for the attitude (β = .49, p < .05). Compatibility also had a significant impact on attitude (β = .25, p < .05). Lastly, ease of use was the weakest significant predictor for attitude (β = .22, p < .05).

Regarding subjective norm regression, there are three factors that were considered significant predictors for subjective norm, namely, peers’ influence, superiors’ influence, and students’ influence. Thus, this regression aimed to examine the predictive power for each of these variables in predicting the subjective norm. Multiple regression results showed that the regression model was significant (F [3, 357] = 110.97, p < .05) with R2 and adjusted R2 = .48. This revealed that 48% of the variation in faculty members’ subjective norm was explained by this model as shown in Table 6. Using beta weights, we determined which predictors contributed to the explanation of the subjective norm. Referring to Table 7, peer influence was the strongest predictor for subjective norm (β = .35, p < .05). Student influence also had a significant impact on subjective norm (β = .26, p < .05).
Regarding perceived behavioral control regression, there are three factors that were considered significant predictors for perceived behavior control, namely, self-efficacy, facilitating resources, and facilitating technology. We suggested privacy concerns as one more predictor that might act as a significant contributor in predicting perceived control. This regression analysis aimed to examine the predictive power for each one of these four predictors in predicting perceived control. Multiple regression results showed that the regression model was significant \((F [4, 356] = 57.47, p < .05)\) with \(R^2 = .39\). This revealed that 39% of the variation in faculty members’ behavioral control was explained by this model as shown in Table 8. Using beta weights, we determined which predictors significantly contributed to the explanation of perceived behavioral control. As can be seen in Table 9, self-efficacy was the strongest predictor for perceived behavioral control \((\beta = .57, p < .05)\). Privacy

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.63*</td>
<td>.39</td>
<td>.39</td>
<td>.39</td>
<td>.39</td>
<td>57.47</td>
<td>4</td>
<td>356</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Note: Predictors: (Constant), Self-Efficacy, Privacy, Facilitating Resources, Self-Efficacy

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>.129</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>.47</td>
<td>.04</td>
<td>.57</td>
</tr>
<tr>
<td>Privacy</td>
<td>.11</td>
<td>.03</td>
<td>.15</td>
</tr>
<tr>
<td>Facilitating Technology</td>
<td>-.07</td>
<td>.04</td>
<td>-.09</td>
</tr>
<tr>
<td>Facilitating Resources</td>
<td>.11</td>
<td>.04</td>
<td>.13</td>
</tr>
</tbody>
</table>

Note: Dependent Variable: Subjective Norm
concerns also had a significant impact on perceived behavioral control ($\beta = .15, p < .05$). Privacy concerns was followed by facilitating resources, which was also a significant predictor for perceived behavioral control ($\beta = .13, p < .05$). However, facilitating technology was not a significant predictor for perceived behavioral control ($\beta = -.09, p > .05$). Indeed, it adversely affected perceived behavioral control. Therefore, for each one standard deviation increase in perceived behavioral control, there was a decrease in facilitating technology construct by .09 standard deviation. This result is consistent with findings from Paver's study (2012). Paver also found facilitating technology was not a significant factor in predicting perceived behavioral control among faculty ($\beta = -.07, p > .05$).

Summary of Regression Results

According to the regression analysis, attitude and subjective norms were significantly related to faculty members’ intentions to use social media, but perceived behavioral control was not. With respect to attitude, all three factors suggested by DTPB were significant predictors (perceived usefulness, ease of use, and compatibility). With regards to subjective norms, all three factors suggested by DTPB were significant predictors (students’ influence, peers’ influence, and superiors’ influence). Regarding perceived behavioral control, self-efficacy, privacy, and facilitating resources were significant predictors. Facilitating technology was not a significant predictor of subjective norms. Figure 1 summarizes the results for all the conducted regression analyses.

![Figure 1. Model summarizing relationships among constructs](image)

In order to answer the second research question, we used independent t-tests, starting with examining whether gender has an impact on faculty intention to adopt social media. Equal variance was assumed because Levene’s test was not significant ($F_{359} = 2.97, p = .09$). The result showed that there was no significant difference between the intention of male faculty members ($M = 2.73, SD = .75$) and female faculty members ($M = 2.71, SD = .84$) toward embracing social media in their teaching attributed to their gender, $t_{359} = .068, p > .05$. Also, we investigated the influence of gender across all 14 constructs and found no significant difference between male and female faculty responses.

After that, the faculty member nationality (Saudi vs. non-Saudi) was examined by conducting an independent t-test in order to identify whether it has an influence on faculty respondent intentions to adopt social media in pedagogy. Equal variance was assumed because Levene’s test was not significant ($F_{359} = .005, p = .95$). The result showed that there was no statistically significant difference between Saudi ($M = 2.66, SD = .80$) and non-Saudi ($M = 2.79, SD = .82$) faculty’s intention toward adoption of social media, $t_{359} = -1.47, p > .05$.

In addition, in order to examine whether faculty members’ academic rank has an impact on their intention to adopt social media in pedagogy, we conducted a one-way ANOVA test. The F for the one-way ANOVA was not statistically significant: $F_{4,356} = .890, p > .05$. That is, there is no statistically significant difference between the groups attributed to their academic rank.

Next, the faculty members’ colleges were examined by conducting a one-way ANOVA test as to whether they have an impact on faculty members’ intention to adopt social media in pedagogy. The result showed that the F of the one-way ANOVA test was statistically significant: $F_{3,357} = 5.430, p < .05$ as shown in Table 10. Tukey’s test (Table 11) showed that there is a difference in the intention of faculty who teach at Health colleges and the intention of faculty who teach at Arts and Education colleges in favor of faculty at Arts and Education colleges. The mean of faculty members’ intention at Health colleges ($M = 2.40$) was smaller than the mean of faculty members who teach at Arts and Education colleges ($M = 2.86$).

The Pearson correlation was used to examine whether faculty members’ age or teaching experience were associated with their intention. The results also showed that there was no significant
relationship between faculty members’ age and their intention, $r (361) = -0.02$, $p = 0.68$. Also, there was no significant relationship between faculty members’ teaching experience and their intention, $r (361) = -0.06$, $p = 0.28$. However, the result suggests that there was a significant correlation between teaching experience and age: $r (361) = 0.79$, $p < 0.05$. Therefore, age and teaching experience were not associated with participants’ intention to use social media for instructional purposes.

DISCUSSION

Factors Related to the Intention to Incorporate Social Media in Teaching

This section sheds light on the faculty members’ intentions of adopting social media for instructional purposes. The results showed that faculty members’ attitudes and their subjective norms were related to faculty members’ intention to use social media in their teaching. Attitude explained a large portion of variance in faculty members’ intentions. Subjective norms had a lesser contribution in explaining the variance in intentions, and there was no significant contribution in the variance from perceived behavioral control. It is clear that respondents’ attitudes about the worth of adopting social media positively impacted their intention. This finding is consistent with prior studies that found the attitude to be a significant predictor for the intention to integrate technology into teaching (Paver, 2012) and for the intention to integrate social media into teaching (Almeshal, 2013; Al-Taamneh, 2011; Hartshorne et al., 2010; Sadaf, 2013).

Likewise, faculty members perceived that referent groups’ viewpoints also had an influence on their decision to use social media for instruction. This conclusion is supported by previous research (Almeshal, 2013; Al-Taamneh, 2011; Paver, 2012; Sadaf, 2013). However, this finding contrasts with the results of Hartshorne et al. (2010), which found that subjective norms had no significant effect on faculty’s intention to adopt Web 2.0 in their teaching practices. One potential explanation might be attributed to the study population. The Saudi community is generally considered collectivist, while American society is more individualistic. In collectivist societies, such as Saudi Arabia, social pressure could have more influence on people’s intentions to adopt practices than in individualist societies (Park & Yang, 2012).

With respect to perceived behavioral control, its effect on faculty intention was not significant, and this result is inconsistent with the DTPB’s expectations. Previous studies revealed a significant impact of perceived behavioral control on intention (Almeshal, 2013; Al-Taamneh, 2011; Hartshorne et al., 2010; Paver, 2012; Sadaf, 2013). However, the present study’s findings are consistent with those of Hung and Jeng’s study (2013). This might be due to faculty member respondents in this study believing they had the required technological tools, knowledge, and skills for the integration of social media in teaching. According to Hung and Jeng (2013), “The more resources, knowledge and

\[
\begin{array}{|c|c|c|c|c|c|}
\hline
\text{(I) College} & \text{(J) College} & \text{Mean Difference (I-J)} & \text{Std. Error} & \text{Sig.} & \text{95% Confidence Interval} \\
\hline
\text{Arts and Education colleges} & \text{Sciences and Management colleges} & .21 & .10 & .16 & .05 \text{ to } .47 \\
\hline
\text{Engineering colleges} & \text{Health colleges} & .16 & .17 & .76 & -26 \text{ to } 59 \\
\hline
\end{array}
\]

Note: All mean differences were significant at the 0.05 level.
opportunities individuals think they possess, and the fewer obstacles or impediments they anticipate, the greater should be their perceived control over the behavior” (p. 268). This statement implies that faculty members typically seem to have a high level of perceived control regarding their intentions to use social media in pedagogy. However, this study suggests that even if faculty members feel they have the capacity and resources to use social media in teaching, this feeling will not affect their intentions to integrate social media in teaching.

Perceived behavioral control did not significantly predict intentions. As the construct was made up of scales pertaining to self-efficacy, facilitating resources, and facilitating technology, the nonsignificant findings might be caused by the already extensive use of social media applications among faculty members. In other words, given that faculty members are already familiar with this kind of technology in their daily lives and have sufficient proficiency in this area, they may not feel that the skills needed for social media applications are an impediment to incorporating the technology into the classroom. Also, the use of social media applications does not require advanced technological preparation such as computer labs. Furthermore, faculty and students have access to many easily available social media applications via their smartphones or tablets for the purpose of enhancing their instruction. This is corroborated by perceived behavioral control’s construct having the highest mean and lowest variability amongst the framework constructs.

Another explanation of the nonsignificant results of perceived behavioral control in predicting intention might be attributed to the poor internal consistency of the perceived behavioral control construct. As mentioned before, the Cronbach’s alpha for this construct is .67, which is considered low in the view of some researchers. Nunnally (1978) recommends using alpha levels greater than .7 as the standard for minimally acceptable Cronbach’s alphas. As a result, the low alpha may indicate that the items of this construct fail to accurately capture this construct. Further, the number of items used to capture this construct was minimal (i.e., three). Increasing the number of items in the scale could lead to a higher alpha. Alternatively, excluding items that contribute to low internal consistency could raise the Cronbach’s alpha and, in turn, could better capture the perceived behavioral control construct.

**Attitude’s Antecedents**

In this study, attitude was composed of three factors: perceived usefulness, compatibility, and ease of use. Out of these three, perceived usefulness seemed to be the biggest determinant of faculty attitude. This result is consistent with the findings of other studies (Al-Taamneh, 2011; Hartshorne et al., 2010; Paver, 2012; Sadaf, 2013). Compatibility also significantly contributes to predicting faculty members’ intentions. This result agrees with prior studies (Al-Taamneh, 2011; Hartshorne et al., 2010 Paver, 2012; Sadaf, 2013). Ease of use was also a significant contributor in predicting faculty members’ intentions. This result is consistent with the results of other studies (Al-Taamneh, 2011; Hartshorne et al., 2010; Sadaf, 2013) but contrasts with findings from Paver’s study (2012). This contrast may be due to Paver’s ease of use construct being unreliable because the Cronbach’s alpha was too low (α = 0.47). These results indicate that faculty members’ attitudes toward integrating social media tools into teaching is related to their perception about the pedagogical values and the benefits of these tools in teaching practice, the degree of compatibility of these tools with faculty teaching style and the subject to be taught, and the ease of integrating these tools into teaching.

**Subjective Norm Antecedents**

The findings of this study indicated that faculty members’ peers, students, and superiors accounted for a significant amount of variance in faculty members’ subjective norms. This result is in line with other studies (Al-Taamneh, 2011; Hartshorne et al., 2010; Paver, 2012; Sadaf, 2013). The findings from this study also suggested that faculty members’ peers, students, and superiors, in that order, are the most impactful referent groups for influencing faculty members’ decisions to use social media in their teaching.

**Perceived Behavioral Control’s Antecedents**

In this study, perceived behavioral control was composed of four factors, namely, self-efficacy, privacy, facilitating conditions, and facilitating technology. In this study, self-efficacy was the most significant contributor in accounting for perceived behavioral control. This result is consistent with prior studies (Almeshal, 2013; Al-Taamneh, 2011;
Dermentzi et al., 2016; Hartshorne et al., 2010; Paver, 2012; Sadaf, 2013) and suggests that faculty members who are more confident of their skills and abilities regarding adopting social media as instructional tools are more likely to have more positive perceptions about controlling the adoption of social media in teaching.

With respect to privacy concerns, they were found to adversely affect faculty members’ perceived control. This result indicates that when faculty members have a concern about their privacy being violated, their perception of having control over the adoption of social media will decrease. This result is consistent with Dermentzi et al.’s (2016) study, which found that increased control over privacy is positively related to academics’ perceived behavioral control when using online technologies.

As far as facilitating resources are concerned, it was found to be positively correlated to perceived behavioral control. This result is contrary to several prior studies (Al-Taamneh, 2011; Dermentzi et al., 2016; Hartshorne et al., 2010; Paver, 2012; Sadaf, 2013) but consistent with Taylor and Todd (1995b). Faculty members believe that in order to have control over the adoption of social media, they must have the needed resources (i.e., policy and time) that facilitate the adoption of social media. One potential explanation why this study differs from the previous studies is that most of the studies mentioned earlier used only one item to represent the construct (Al-Taamneh, 2011; Hartshorne et al., 2010; Sadaf, 2013).

Facilitating technology was found to have no impact on perceived behavioral control. This result is in line with several prior studies (Al-Taamneh, 2011; Hartshorne et al., 2010; Paver, 2012; Sadaf, 2013; Taylor & Todd, 1995b). Given that most of the participants responded that they had adequate means for using these facilitating technologies provided by the university (i.e., internet access, training, and technical support), it makes sense that it is not a factor that would impact perceived behavioral control. Further, the nonsignificant findings might also be due to faculty members already having or easily obtaining access to social media by using their own smartphones, tablets, or computers in addition to those resources provided by the university.

The Influence of Demographic Variables on Faculty Intention to Adopt Social Media in Teaching

This section discusses the impact of faculty’s gender, age, nationality, academic rank, and colleges on their intention to use social media in their pedagogy. The findings indicated that faculty members’ intentions to adopt were affected by neither gender nor age. This result is consistent with several other studies (Aladwani, 2011; Alasfor, 2016; Alsadoon, 2018). With respect to faculty nationality, there was also no significant difference between Saudi faculty and non-Saudi faculty in their intentions toward integration of social media into teaching. As far as the academic rank was concerned, there were no significant differences between faculty members. Regarding faculty members’ colleges, there was a significant difference between faculty members who teach in Health colleges and faculty members who teach in Arts and Education colleges in favor of the latter. To identify the reasons behind this result, we performed one-way ANOVA tests across all the DTPB factors, as well as Tukey tests. The only difference was related to the superior influence construct. The finding showed that faculty in the Arts and Education colleges were more influenced by superiors than their counterparts in the Health colleges. Also, by conducting a one-way ANOVA across all the questionnaire items, there were significant differences between faculty members’ responses in Health colleges and faculty members’ responses in Arts and Education colleges in items 29, 31, and 32 in favor of faculty members in the Arts and Education colleges. Faculty members in the Arts and Education colleges felt more comfortable regarding the adoption of social media, and they received more technical support and more training than their counterparts in Health colleges in regard to adopting social media.

Conclusion and Implications

Given that using social media has become prevalent among college students and that social media tools can add pedagogical value for teaching, faculty members should be encouraged to harness these tools and use them to improve student outcomes. However, faculty members show low levels of effectiveness in the adoption of these tools in their teaching. Therefore, the present
study contributes to a better understanding of faculty members’ intention to adopt social media to support their teaching.

With respect to the factors contributing to faculty’s integration intention of social media, faculty members’ attitudes and subjective norms were the main drivers for their intention to use social media in their teaching. However, perceived behavioral control did not affect faculty members’ intentions to employ social media for teaching purposes. Also, the result of this study suggests that DTPB is an adequate framework for predicting faculty members’ intentions at IAU to integrate social media tools in teaching students. Based on the analysis of the DTPB results, all the DTPB constructs were significant factors in predicting intent to adopt social media, with the exception of perceived behavioral control and facilitating resource constructs. Further, this study included privacy concerns in predicting perceived behavioral control and found that privacy concerns were significantly related to perceived behavioral control. As such, this finding suggests a possible extension of the DTPB framework in the context of using social media for educational purposes.

With that said, the result of this study should help professional development designers better understand their audience and provide workshops that specifically increase faculty member intentions to adopt social media in teaching. For instance, attitude toward embracing social media in instruction is the most significant element that affects faculty member attitudes at IAU, with subjective norms as a lesser and second significant element. Faculty members at IAU build their decisions to integrate or not to integrate social media into delivering their teaching mainly on their attitudes toward social media, with a lesser emphasis on addressing social pressures. Therefore, decision makers have to direct more attention, efforts, and investment toward encouraging faculty members to have a positive attitude regarding the adoption of social media in delivering their teaching. In order to develop more positive attitudes toward using social media in their pedagogy, faculty members have to be aware of the promises of employing social media in teaching activities (i.e., perceived usefulness), how compatible the social media is with faculty teaching styles and the subjects that will be taught (i.e., compatibility), and the ease of integrating it into teaching (i.e., ease of use).

Further, with regards to subjective norms, workshops or seminars conducted by fellow faculty members that highlight the experiences and benefits of using social media in teaching could help other faculty members integrate more social media into their own curriculums. In doing so, these workshops or seminars could also increase favorable feelings towards these tools. As shown in the results of this study, attitude is the strongest predictor for the intention, while faculty members’ lack of social media adoption (e.g., blogs) at IAU might be attributed to their attitude or subjective norm. By hosting peer-led workshops or seminars aimed at defining the potential of social media tools, how they would be compatible with classroom use, and how easily they could be integrated into instruction, administrators may be able to increase favorable feelings towards these tools. In doing so, the university is encouraging positive dialogue between faculty, students, and superiors about integrating social media usage into learning.

Future studies might replicate this study in other Saudi universities to examine the robustness of the DTPB framework, and they should use several items to measure each construct in order to acquire more reliable results. Also, this study identified faculty members’ intentions toward the use of social media at IAU and researched social media in general, without focusing on a specific social media tool. As such, we recommend that future research focus on specific individual social media tools and study how faculty members perceive these tools’ potential in enhancing teaching.

In conclusion, we hope that the results of this study can enlighten and aid educators in considering the impact of social media in academia. Further, this study should help policymakers and administrators at IAU have a clearer image of the main factors that drive and hinder the adoption of social media for instructional purposes among faculty. As a result, policymakers and administrators can take some actions that will increase the use of social media in classrooms, such as instituting new policies that faculty should use social media in classrooms, providing intensive professional development on how to use social media, or increasing faculty members’ knowledge about the importance of social media for teaching.
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