Understanding Factors That Influence Imam Abdulrahman Bin Faisal Faculty Members'

Intentions to Adopt Social Media in Their Teaching Practices

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Abstract

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Intentions to Adopt Social Media in Their Teaching Practices

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With the widespread use of social media technologies among college students, it
is their instructors' role to effectively employ these technologies to improve students'
teaching and learning. Since the use of social media technologies for instructional
purposes in Saudi Arabia is still not prevalent, there is a need to explore faculty
members' intentions towards using social media in their pedagogies. The current study
attempted to identify faculty member perceptions regarding perceived benefits and risks
associated with integrating social media in teaching. Also, this study concentrated on
identifying and understanding the factors that encourage or hinder faculty members'
intentions at the Imam Abdulrahman Bin Faisal University to use social media tools in
their practices.

The findings of this study indicated that a high percentage of faculty members
perceived the potential benefits of social media in enhancing the interaction between
student and faculty and among students, as well as the benefit of using social media in
sharing course knowledge and contents. As far as the risks of integrating social media in
teaching are concerned, critical remarks, privacy, and distraction in classroom were the
most perceived risks among faculty members.

With respect to the factors contributing to faculty's integration intention of social media, faculty members' attitude and subjective norm were the main drivers for their intention to use social media in their teaching. However, perceived behavioral control did not affect faculty members' use intentions to employ social media for teaching purposes. The results of this study can enlighten and aid educators in considering the impact of social media in academia. Further, the results of this study may be used to help policy makers to help understand the reasons underlying motives for adoption of these tools in education, and to use these motives to help build more effective instructional curricula.

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Chapter 1: Introduction

Background of the Study

There is no questioning the importance of education in developing nations. An education system is considered to be the backbone of a country (Begum, 2012). Countries of the world have been working hard to develop their educational systems. They have long focused their attention on working to develop their educational systems by prioritizing education and investing money in its enhancement.

For example, in Saudi Arabia, the government allocates a large part of its budget to develop the educational sector, including public education, higher education, and technical and vocational schools. The Saudi government allocated 25% of its budget, which is approximately equal to US $57.9 billion, to this sector (Saudi Ministry of Finance, 2014).

One way to improve the educational systems is to harness technology for instructional purposes. Adopting technology has played a vital role in improving the quality of the teaching-learning process (Pedro, 2011). Nowadays, the world is witnessing an enormous revolution in communications and information technology. So, educators have to exploit the emergence and diffusion of technology in order to enhance teaching and learning.

In Saudi Arabia, the Ministry of Education has begun for harnessing technology for educational purposes. One of the major educational initiatives, the King Abdullah bin AbdulAziz Public Education Development Project (Tatweer), is designed to achieve

holistic development in education in Saudi Arabia. One of the most significant purposes of this project is using information technology to improve learning.

The importance of employing technology as a teaching and learning tool in higher education stems from four reasons. First, technology plays a vital role in enhancing the quality of learning. According to Lindbeck and Fodrey (2011), using technology in the educational process has a positive impact on the performance of students. Second, it can provide additional opportunities for accessing education and training (Erdem & Kibar, 2014). Third, it can play a significant role in reducing the overall cost of education (Bates,1997, as cited in Mouzakitis, 2009), and lastly, technology can be utilized in educational environments to improve the way education is delivered, for example, by using social media (Erdem & Kibar, 2014).

 Using technology to enhance teaching methods leads to various benefits, such as promoting students' critical thinking, assisting instructors in delivering knowledge and information, enhancing curriculum, and improving learning (Ololube, Eke, Uzorka, Ekpenyong, & Nte, 2009). Using technology in the classroom is considered a powerful productivity tool that augments students' understanding and performance (Lindbeck & Fodrey, 2011).

Beside recent advancements and revolution in technology and its applications, 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. 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 one way or another in their lives (Yakin & Tinmaz, 2015).

Therefore, instructors can take advantage of student familiarity with information technology and leverage it for enhancing digital student learning. One technology in widespread use among college student 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 & Heinlein, 2010, p. 61). Social media has substantially improved communication, socialization, and learning among individuals, organizations, and communities (Aifan, 2015). Participating in social media such as YouTube, Twitter, Facebook, Snapchat, WhatsApp, and Instagram has become a part of people's daily life activities. Given that social media tools are prevalent among college students and they spend a considerable amount of time using them (Li & Pitts, 2009), instructors have to investigate if there is a chance to integrate these tools in their teaching (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) conclude that social media tools are the most beneficial Web 2.0 tools when it comes to 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.

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 improve student learning (Al-Otaibi & Houghton, 2016; Bennett, Maton, & Kervin, 2008; Prensky, 2001). This would give students an active role in their learning process by giving them new opportunities to participate in the class, discuss interesting topics, and collaborate with other students. 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 (Dabbagh & Reo, 2011). Also, some faculty might use Twitter or Facebook to engage students in discussion or share important concerns about subject matter, 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 (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 build their learning progress together (Kelm, 2011). Furthermore, embracing social media in teaching provides a great chance for students to develop their 21st century skills such as communication skills (Al-Khalifa & Garcia, 2013), critical thinking (Manan, Alias, & Pandian, 2012), and collaboration

(Chen & Bryer, 2012). For these benefits of social media, social media should be adopted in teaching and learning.

Statement of Problem

Since college students who are between the ages of 18-25 grew up with technology, they are more knowledgeable regarding the use of social media than their professors (Zelick, 2013). According to Al-Otaibi and Houghton (2016), college students already perceive the benefit of using Web 2.0 platforms in learning. Therefore, demands are placed upon faculty members by their institutions to integrate social media technologies into traditional instruction as supplemental tools to meet students' expectations (Al-Otaibi & Houghton, 2016). Universities have to prepare their faculty to successfully implement information technology in their pedagogy to teach this digital generation.

Although there are many potential benefits of embracing social media technologies in teaching, the adoption of these tools for learning among faculty has been slow (Capo & Orellana, 2011). Hartshorne, Ajjan, and Ferdig (2010) conducted a study to identify factors that predict faculty members' decisions to integrate or not integrate Web 2.0 tools in their instruction. They found that university instructors recognized the usefulness of using social media in instruction; however, the majority of them did not integrate these tools in their own teaching.

According to Alsurehi and Al Youbi (2014), the effectiveness of using social media for enhancing the educational process has been proved in the Western world. However, the effective use of social media in academic contexts in Saudi Arabia is not

yet prevalent (Al-Daraiseh, Al-Joudi, Al-Gahtani, & Al-Qahtani, 2014). The use of social media for instructional purposes in Saudi Arabia is still in its infancy (Alsurehi & Al Youbi, 2014), and it is limited to individuals' efforts as opposed to systemic change (Al-Daraiseh et al., 2014). The feasibility and usefulness of employing social media in education in the Arab world are still undiscovered. There has been little research thus far examining the adoption of social media platforms in classrooms among higher education institutions in Saudi Arabia (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; Mbodila, Ndebele, & Muhandji, 2014; Zawacki-Richter, Müskens, Krause, Alturki, & Aldraiweesh, 2015). Because of the differences in culture and educational systems between Western societies and Arab societies, the findings of these studies may not be generalizable to Saudi universities. Therefore, in order to "predict, explain, and increase user acceptance" (Davis, Bagozzi, &Warshaw, 1989, p. 982), it is imperative to understand factors that can be enablers or hindrances to Saudi university faculty members in embracing social media technologies in teaching. Identifying these influential factors will "provide practitioners with sound guidelines for deployment and training" (Gribbins, Hadidi, Urbaczewski, & Vician, 2007, p. 752).

The Purpose of the Study

This quantitative study aims to determine the key factors that impact the intentions of the Imam Abdulrahman Bin Faisal University faculty toward integrating social media tools in teaching their students. According to Taylor and Todd (1995),

"understanding the determinants of information technology usage should help to ensure effective deployment of IT resources in an organization" (p. 145). In order to understand the determinants of acceptance of social media among faculty, the Decomposed theory of planned behavior DTPB framework will be employed to guide this study. It is worth mentioning that this study will only investigate the predictors of faculty members' intentions at the Imam Abdulrahman Bin Faisal University. It did not study the usage behavior. Also, the researcher added an additional factor to the DTPB model factors, which is privacy risk. This factor is expected to influence perceived behavior control.

In addition to helping to answer these questions, this study is exploratory in nature. Specifically, this study sheds light on various forms of social media and how utilized these tools are in education. This is important because integrating social media in pedagogy still under-researched, particularly in Saudi Arabia (Alasfor, 2016). Therefore, this study enriches the literature by providing information about the most and the least adopted social media tools in higher education.

The main objectives of this research are:

- Describing the research population according to their gender, age, teaching experience nationality, college within the university, academic rank, and adoption of social media.

- Understanding the intention of faculty members to adopt social media.

- Investigating the differences in university faculty intention's that are attributed to their gender, academic rank, nationality, and age.

- Identifying faculty members' perceptions of the advantages and risks involved with integrating social media tools in teaching instruction.

The Significance of the Study

Although there are a number of studies with different populations that have investigated the integration of social media in education, there is a significant gap in the literature in regards to understanding the factors that contribute to adopting or rejecting the use of social media in pedagogy, particularly in 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. Further, these three studies are lacking in that they did not conduct analyses examining the validity of the instruments used. Given that the acceptance of using social media for learning among university students and especially among faculty members is an under-researched area, and the current literature investigating this is lacking with respect to analyses revolving around the validity of the instruments used, the present study contributes in two significant ways. First, the present study adds to the body of literature examining the use of social media for teaching purposes in Saudi Arabia. Second, the present study is the first to examine the validity of the instruments utilized in social media research within Saudi Arabia.

Identifying and understanding various factors that could hamper or facilitate incorporating social media in education settings is very crucial (Echeng & Usoro, 2014). Understanding determinants that affect potential users' intentions and adoption of technology will increase the effective deployment of technology usage in institutions

(Tyler & Todd,1995). So, the result of this study will benefit also policy makers, administrators, and technology coordinators at the Imam Abdulrahman Bin Faisal University, supporting the motivational factors and eliminating or reducing the inhibitory factors which will lead eventually to more adoption of the Social media. It will diagnose the main reasons that prevent faculty members from using social media. Therefore, policy makers in the Imam Abdulrahman Bin Faisal University will have a clear image of any deficiencies in their current system, which may lead them to take some actions that will increase the use of social media in classrooms, such as instituting new policies that educators should use social media in classrooms, providing intensive training on how to use social media, or developing infrastructure in the university.

Finally, administrators at the Imam Abdulrahman Bin Faisal University and other university administrators in Saudi Arabia may benefit from this study. In Saudi Arabia, many education policies are mandated by the Ministry of Education, a governmental department that focuses on cutting-edge educational studies such as this. Therefore, perhaps this study may assist in shaping national policies on the use of social media in education.

Research Questions

1. What perceived benefits and risks of employing social media for teaching do faculty members at Imam Abdulrahman Bin Faisal University identify?
2. To what extent do attitude, subjective norms, and perceived behavioral control predict faculty members' intentions to adopt social media?

3. Are there statistical differences in faculty members' intentions at Imam Abdulrahman Bin Faisal University to adopt social media technologies in their teaching attributed to the demographics variables (gender, nationality, age, academic rank, colleges)?

Limitations

This study uses the decomposed theory of planned behavior (DTPB) as grounded theory. 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. However, intention is not always able to predict a behavior.

That said, in this study, intention employed as a dependent variable, much as it has been in many previous studies (Ajjan & Hartshorne, 2008; Osorio & Papagiannidis, 2014; Taylor & Todd, 1995). Since social media has not effectively been used as an educational tool in higher education in Saudi Arabia in the past, it is not possible to measure the actual behavior, so the researcher did not use the full version of the model. Therefore, it is recommended that any future study should include behavior as a focus.

There are several potential limitations in regards to validity and reliability. In regards to instrument validity, the translation process of the questionnaire may be considered a limitation, because the original questionnaire was written in English before being translated to Arabic. Moreover, the nature of self-reported data also constitutes another potential limitation, as participants answers' may be affected by social desirability. Also, study participants were recruited via their faculty email addresses, so,

faculty members who do not check their email frequently may not get a chance to participate.

Moreover, the researcher looked at social media tools without differentiating between the types of these tools, even though respondents might have different attitude regarding different social media tools. Social media tools include social networking websites (such as Facebook or LinkedIn), microblogging, wiki, blogs, and so on. Future researchers may choose to focus on any one of these tools, because it is possible that the influential factors that enable or hinder the use of social media differ based on the social media types.

Delimitation

This study is limited to the Imam Abdulrahman Bin Faisal University in Saudi Arabia because the researcher has access to this institution. It was conducted during the 2017-2018 academic year and included all male, female, Saudi, and non-Saudi faculty members. "Faculty members" refers to all teaching assistants, lecturers, assistant professors, and associate professors. Further, this study investigated all faculty members at the Imam Abdulrahman Bin Faisal University, whether they use social media or not.

Definition of Terms

Adoption of social media. In this study, this refers to the user's intention or decision to accept and use information technology systems such as social media tools (Alqahtani, Watson, & Partridge, 2010).

Attitude. Attitude is defined as the extent to which an individual favors or does not favor using technology (Taylor & Todd, 1995).

Blog. According to Anderson (2007), a blog is a webpage that "consist[s] of brief paragraphs of opinion, information, personal diary entries, or links, called posts, arranged chronologically with the most recent first, in the style of an online journal" (p. 7).

Compatibility. Compatibility refers to the extent to which an innovation is consistent with an adopter's existing values, prior experiences, and social system (Rogers, 2003).

Ease of use. This refers to the extent to which innovation is perceived to not require much in the way of labor or skills to understand or use (Rogers, 2003).

Facilitating condition. Facilitating conditions refer to the availability of the required resources that are needed to implement an innovation (Tyler & Todd,1995).

Intentions. 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. As a general rule, the stronger the intention to engage in a behavior, the more likely should be its performance" (Ajzen, 1991, p. 181).

Perceived behavior control. Perceived behavior control is defined as the degree to which individuals think they have control over particular behaviors (Ajzen, 1991).

Perceived usefulness. In this study perceived usefulness and relative advantage were used interchangeably. Relative advantage is defined as the extent to which an individual perceives that an innovation is better than the one that will be replaced by it. This can be measured by economic benefits, satisfaction, and convenience (Rogers, 1983). According to Rogers (2003), the more that individuals perceive a technology to be useful, the more likely it is that they will use that technological innovation.

Self-efficacy. 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). Self-efficacy has been shown to positively influence one's behavior (Taylor & Todd, 1995). The more self-efficacy potential an adopter has toward an innovation, the more likely he or she will accept and use it.

Media sharing. In this study, media sharing refers to websites or mobile apps that allow users to share photos and videos such as YouTube, Snapchat, Flicker and Instagram.

Microblogging. It is a one form of blogs; however, there is a limitation on the size of information that can be posted per user (Zarrella, 2009).

Social media. Kaplan and Heinlein (2010) define social media as "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" (p. 61). According to Dabbagh and Reo (2011), the term *Web 2.0* is used interchangeably with social media.

Social networking. It refers to web-based service that allow users to create their own personal profiles and network with other users who hold the same interest (Kaplan & Heinlein, 2010).

Subjective norms. According to Taylor and Todd (1995), 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, or administrators.

Wiki. According to Ajjan, and Hartshorne (2008), Wiki is abbreviated from What I Know Is. It refers to websites that allow single or multiple users to collaboratively create, delete, or edit their own content.

Organization of the Study

This study consists of five chapter. In chapter one, the research problem is identified and the need to resolve this problem is explained. Also, the research questions, hypothesis, limitations, and delimitations were explained. In the second chapter, employing social media in teaching and how these tools could improve student learning were discussed. Also, this chapter uses the DTPB framework to review the possible factors that could motivate or hinder faculty in embracing social media in teaching their students. Chapter three focuses on the research design and methods of data analysis. This chapter also covers the selection of the target population, required permissions such as IRB, the preparation of data collection instruments, and information about the data collection and data analysis procedures. In chapter four, the researcher will present the results that will be obtained from analyzing the collected data. In the last chapter, the researcher will link the results of this study with other researchers' studies and provide recommendations and suggestions for future researchers.

Chapter 2: Literature Review

This study is designed to determine and understand the factors that are associated with the adoption of social media in pedagogy. It will assess the influence of attitude, subjective norms, and perceived behavior control on faculty members' intentions to embrace social media in their teaching. In this chapter, the researcher will examine some important topics related to social media, beginning with the importance of using social media in higher education. This will be followed by a discussion of how using social media makes a positive impact to promote students' learning by enhancing their motivation, engagement, and collaboration. Next, light will be shed on the potentials and risks of the use of social media technologies for educational purposes. In addition, theories that relate to the instructional usage of social media in higher education, including uses and gratification, social networks, connectivism, and constructivism theory, will be discussed. Lastly, the theoretical framework the researcher intend to use in this study will be presented: the historical evolutions of the DTPB model, the reliability of the model, and an overview of research that used the same model in the context of social media.

Social Media and its Benefits for Learning

Social media is defined as "Internet-based applications that allow the creation and exchange of content which is user generated" (Kaplan & Haenlein, 2010). There are different forms of social media tools including Blogs (such as, Blogger or WordPress), Wikis (such as, Wikipedia or Wikispaces), Social networking (such as, Facebook, Google+, or LinkedIn), Microblogging (such as, Twitter), Instant Messaging (such as,

WhatsApp or LINE), Video conference (such as, Google hangout or skype), and Media

sharing (such as, YouTube, Instagram, or Snapchat). The users of social media

technologies can use them for various purposes, such as learning, entertainment, social

interaction, or escapism (Luo, Chea, & Chen, 2011). According to Storsul et al. (2008),

what people often do in social media looks like four activities that people do in real life,

including meeting friends in a cafe, participating in a celebration, playing in a park, and

shopping in a mall. Next Thing Now (2008) stated, "Social networking are aiming to be

the one-stop shop for all your Internet needs" (p. 34). Therefore, users will spend more

time on social media to do more activities (Next Thing Now, 2008). Also, using social

media has become popular among academic institutions. Reuben (2008) conducted a

quantitative study that included 148 universities investigating purposes for using social

media tools. Reuben found that the colleges and universities utilized social media tools

for various purposes, including recruitment, marketing, and communications.

These days, social media use has increased among all age levels (Tarantino,

McDonough, & Hua 2013). Therefore, social media can be employed in the education

sector to play various beneficial roles (Al-Khalifa & Garcia, 2013; Tarantino et al.,

2013). The use of social media tools can establish new communication channels among

students, between students and educators, and among educators (Al-Khalifa & Garcia,

2013; Chen & Bryer, 2012; Tarantino et al., 2013; Wang, 2013). Social networking sites

have become dependable software for sharing data among students in a convenient

manner (Tarantino et al., 2013). Zgheib and Dabbagh (2013) interviewed five university

faculty and surveyed 152 students to explore their perceptions of the educational value of

using social media; their results showed that both students and faculty members acknowledged the positive impact of using social media on preparing students for the workplace, enhancing their motivations, and improving their achievements by establishing connections among students, faculty, and experts.

In addition, social media tools are considered an effective means to facilitate discussions among students and to improve students' understanding of subject matter (Alqahtani, 2016; Chen & Bryer, 2012; Wang, 2013). Consequently, incorporating these tools in classrooms helps to foster overall student learning (Tarantino et al., 2013). Moreover, social media also plays an important role in sparking students' creativity. Students' creativity will develop when they explore a course designed in a new style that differs from conventional pedagogy. Also, using a social media blog or platform such as YouTube allows students to come up with and share creative projects. Furthermore, students may use social media as a research tool to learn new knowledge.

Student engagement and social media. Engagement is one of the most significant factors that affect students' learning (Asgari & Kaufman, 2008). The importance of using social media stems from its role in increasing students' engagement. Current research suggests that using social media tools for educational purposes can foster student engagement (Chen & Bryer, 2012; GreGory, GreGory, & Eddy, 2014; Junco, Heiberger, & Loken, 2011; Mazer, Murphy & Simonds, 2007; Wang, 2013). Since the adoption of social media tools increases student engagement, develops student relations with peers, and establishes a virtual community, it ultimately increases students'

overall learning (Alqahtani, 2016; Delello, McWhorter, & Camp, 2015; GreGory et al., 2014; Wang, 2013).

Student engagement is indicated by the time and effort that students spend in interactions with others during educational activities (Kuh, 2001). Students who use technology tools for academic purposes are more likely to use them in academic collaboration with other students (Laird & Kuh, 2005). According to Pike, Kuh, and McCormick (2011), students become more engaged with their courses when they participate in a community of students, which enhances the achievement of learning objectives. Therefore, since when students engage more with technology, their engagement and connection with their peers, educators, and course content also increase (GreGory et al., 2014; Mehdinezhad, 2011; Wang, 2013), social media can play an important role in achieving better content learning by increasing student engagement that leads to more connections and establishes a virtual community (Tarantino et al., 2013).

To give an example of this, GreGory et al. (2014) conducted a study to investigate the capability of Facebook for enhancing mathematics teaching instruction. This study included 78 undergraduate students (53 males and 25 females) who were enrolled in a calculus course at a public university in New York. Participants were distributed in two groups. The experimental group was allowed and encouraged to engage in Facebook while the other group was not allowed or encouraged to use it for the class. In the end of the semester, a questionnaire was distrusted to both groups to assess their classroom engagement. Results showed that students who actively used Facebook showed more engagement than students who did not use it. Also, using Facebook had a positive impact

on students' performance in terms of test scores and assignments, and therefore it also had a positive impact on student satisfaction and learning.

Wang (2013) also conducted a study to examine the role of Facebook in fostering students' engagement by encouraging communication among students, between students and faculty, between students and institutions, and between current students and alumni. The researcher drew his convenient purposeful sampling from two different universities to form two classes of undergraduate students aged 20 - 24years. A total of 134 students participated in this study. The first class included 70 participants majoring in Applied Foreign Languages and 64 students majoring in Business Administration. All participants were using Facebook as a communication tool after class.

The findings revealed that Facebook had a positive impact on participants' engagement, grades, and learning, because it combined students' academic and social lives. Students in both majors showed high levels of satisfactions and engagement with their instructors, peers, alumni, and institutions. Therefore, the researcher recommended that faculty should use Facebook as instructional tool to increase students' communications and interactions, and therefore their learning.

Junco et al., (2011) conducted an experimental study to investigate the impact of using Twitter in educational settings on students' engagement and grades. This study included 118 students who enrolled in a seminar course for pre-health professional majors. Sixty-five students were randomly assigned to the experimental group, while 53 students were randomly assigned to the control group. The experimental group used Twitter as part of the class for the full semester (14 weeks) while the control did not.

Based on the pre-test and post-test surveys and the analysis of tweets, the results showed that students in the experimental group had more engagement and a higher average GPA than students in the control group. This indicated that Twitter could be used in college courses as a supplemental tool for enhancing student learning.

Mbodila et al., (2014) conducted a quantitative study to investigate the impact of using Facebook on students' engagement at a South African university. This study included 150 students enrolled in a Foundation Information Technology (FIT) course. At the beginning of the course, students took a questionnaire to check their familiarity with using Facebook and encourage students who did not have Facebook account to create one. At the end of the course, students were asked to fill out the same survey as they had filled out at the beginning of the course, which revealed that 83% of the participants agreed that using Facebook improves student engagement.

On the other hand, Welch and Bonnan-White (2012) conducted a quasi-experimental study to investigate whether using Twitter has an impact on student engagement levels. A total of 205 students participated in this study. This study included four classes; two classes were from Cultural Anthropology and two from Sociology. The four classes were randomly assigned into an experimental group and a control group. After 15 weeks, the researcher assigned all the students to fill out an offline (paper) questionnaire customized from Krause and Coates (2008) about their perceptions of their classroom engagement. They used a four-dimensional scale including "academic, peers, intellectual, and beyond-class" (Welch & Bonnan-White, 2012, p. 328). Using Cronbach's alpha and construct validity, the validity and reliability were confirmed for

the four subscales. For analyzing the data, researchers used descriptive statistics and an independent sample test to identify the differences between the two groups regarding the engagement level. The results showed that there was no statistically significant difference between the two groups in overall engagement and in peer engagement, in intellectual engagement and in beyond-class engagement. However, there was a significant difference in academic engagement between the two groups for the control group who did not use Twitter.

Virtual learning communities in social media. Many researchers believe that the discourse and interactions between individuals is an effective way to obtain knowledge (Tarantino et al., 2013). Collaboration is one 21st-century learning skill that students need to possess. Learners need to know how to work, learn, and share knowledge with other peers, either face-to-face or online through technology (Tarantino et al., 2013). In fact, when students work collaboratively with others to build information, they create community learning. Community learning is a vital factor in improving student learning, because students who work together in a community are able to emotionally and academically support each other (Pike et al., 2011). Social media tools are considered an effective means of facilitating the establishment of learning communities by enhancing communication and collaboration (Tarantino et al., 2013). Since a large part of student learning happens inside the classroom, using social media extends students' learning environments to also include online environments (Chen & Bryer, 2012).

Social media and students' achievement. Using social media for educational purposes in classrooms increases the individual learning achieved by learners (Tarantino et al., 2013). It has been found that students who use social media in their coursework obtain overall better GPAs than students who do not participate in social media (Alqahtani, 2016; GreGory et al., 2014).

In addition to improving students' GPA, using social media in academic settings facilitates student feedback and reflections on course assignments by providing an open environment for communication and developing relationships among students (Ebner, Lienhardt, Rohs, & Meyer, 2010). Moreover, the usage of social medial 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).

The Risks/Challenges Toward Embracing Social Media in Learning

This section will provide a brief overview about the most significant issues that should be taken into consideration by faculty and university leaders in order to enhance the acceptance of social media in academic settings. It will provide some practical implications of how to integrate social media in higher education in Saudi Arabia. Also, it will shed light on some barriers that hinder the use of social media in Saudi institutions and provide solutions for these barriers. Further, it will show how faculty can successfully employ social media in learning.

There are various reasons that could contribute to limiting the adoption of technological innovation in Saudi institutions. To begin with, Alsurehi and Al Youbi (2014) mentioned that the use of social media is limited in Saudi institutions, and they attributed this limitation to the differences in Saudi cultural settings and its educational system from those of Western countries. At the Imam Abdulrahman Bin Faisal University, there are 836 faculty members from different countries around the world, with many different cultures represented. Therefore, it is necessary to have policies that explicitly state what faculty members are allowed to post on their social media profiles and that explain to them the importance of proper, professional content. Everyone is responsible for what appears in his or her profile.

Also, the lack of adoption of technological innovation may be attributed to instructors' unfamiliarity with using social media. There are instructors who do not know how to use social media effectively in classrooms, which constitutes the main challenge toward using social media for learning (Cao, Smith, & Hong, 2013). Also, selecting the appropriate social media tools that are suitable for students and subject matter constitutes another barrier toward embracing social media in educational settings (Tarantino et al., 2013). Since social media technologies include a variety of online websites and application such as Twitter, Facebook, and YouTube, instructors have to assess their students' needs and choose the social media platforms that meet their needs and preferences, because there are some organizations that concentrate on adopting new technology, regardless of what the target audience needs and wants (Ennew & Fernandez-Young, 2006). Instructors should adapt technologies according to students' learning

styles and preferences in order to achieve higher engagement levels by using the

appropriate social media tools (Alrayes & Ali, 2016). For instance, using WhatsApp, a

common application for instant messages, in Saudi universities will be a good idea,

because WhatsApp is the most common tool of social media among the Saudi community

(Go-Gulf, 2016). In a similar study, Tay and Allen (2011) suggested that in order to

successfully use social media in higher education, educators should let students choose

tools that they are comfortable and familiar with, as well as appropriate for the task. They

stated that educators have to pay attention to the design of the social interactions through

social media tools; the design is more significant than the use of these tools themselves

(Tay & Allen, 2011).

In addition, if instructors would like to use social media tools in classrooms, they

have to use them purposefully and effectively for enhancing student learning (Liu, 2010).

Using social media tools for one-way communication, such as for course announcements,

may not improve students' learning. According to An and Reigeluth (2012), in order to

use social media effectively in classrooms, colleges and universities should provide

courses, training, and workshops for their faculty to assist them in selecting and

effectively using social media technologies.

Cao et al. (2013) emphasized the importance of training faculty how to effectively

use social media for teaching. They found a lack of training adversely impacted

university faculty members' intention of adopting social media. They recommended that

educational institutions should provide ongoing training for faculty in order to achieve

the desired results from embracing social media tools. Participation in social media

seminars, workshops, and conferences also give educators more opportunities to see how to use social media effectively in classrooms (Al-Khalifa & Garcia, 2013; Koh et al., 2012). Also, Almeida (2012) suggested that organizations should explain the potential risks regarding the use of social media and train their employees how to use security tools integrated in online applications. Dermentzi, Papagiannidis, Toro, and Yannopoulou (2016) found that self-efficacy influenced academics' intention to use social media. Therefore, they assert the importance of providing adequate training for academics about incorporating social media effectively in learning. Also, an Information Technology (IT) unit in an organization can provide some initiatives to assist social media users in customizing browser settings and installing anti-virus software (Almeida, 2012).

Students' unfamiliarity with specific social media tools leads to a failure to support student learning and usage (Sobaih, Moustafa, Ghandforoush, & Khan, 2016). The educator should not assume that all students are familiar with the use of social media tools (Tarantino et al., 2013). There are some students who need closer attention or supervision (Cole, 2009). So, it is recommended to provide professional development for the students to ensure that everyone is familiar with the selected social media platforms (Sobaih et al., 2016).

Furthermore, another risk of using social media is the possibility of negative effects on student performance by decreasing the amount of time spent preparing for a class (Tariq, Mehboob, Khan, & Ullah, 2012). One reason for poor student performance is that some students may lack time management skills; they cannot balance between the use of social media for academic purposes versus other online activities (Tarantino et al.,

2013). Other researchers attribute this negative impact of social media to the large number of notifications, which often distracts students from finishing their academic tasks (Chen & Bryer, 2012).

Another challenge for incorporating social media tools in classrooms is that social media tools tend to equate the authority of the educator with the active students (Tarantino et al., 2013). Learning using these tools depends on the constructivist approach, in which learners and instructor are equal participants in sharing their knowledge to understand a particular topic (Tarantino et al., 2013). Although having different sources for disseminating knowledge beside the educators seems like a sound and beneficial idea, it may lead to other issues such as privacy breaches or cyber-bullying (Alsurehi & Al Youbi, 2014; Alwagait, Shahzad, & Alim, 2015; Balas, 2010; Chen & Bryer, 2012). If users of social media websites post some of their personal information in their profiles, some computers hackers may use this information to invade their privacy or steal their identity (Alwagait et al., 2015). Thus, institutions should provide policies and standards for instructional support of the use of social media.

The last barrier is that using social media has become part of many students' lives, so its excessive use may lead students to become addicted and negatively influence their lives (Alwagait et al., 2015). In fact, there are contradictory studies about using social media (Maqableh et al., 2015), with some stating that general social network usage has a negative impact on student performance, while others concluding that social network tools either have a positive effect or no effect at all on student performance.

Maqableh et al. (2015) conducted a quantitative study to investigate the relationship between the use of social media sites and academic performance among students at the University of Jordan. The study considered the influence of gender, age, student academic level, the amount of use each day, the amount of use each week, and the most visited sites. It was limited to undergraduate students who were enrolled in the Social Media Network class at the University of Jordan. The researchers used the drop and collect technique to collect 366 questionnaires. Most of the participants in this study were females (71%). The findings showed that there was a positive relationship between the use of social network websites and students' academic achievements (R = 0.839). The regression, which predicts students' achievements from the use of social media sites, was statistically significant, $F (1, 364) = 862.852$, $p < .05$, $R^2 = 0.703$. That means the use of social media websites explained 70.3% of the variance in students' achievements. Also, the finding showed that there was a significant effect of the amount of use of social networks websites per week on the students' academic achievements. Finally, age, a student's academic level, the amount of use each day, and the most visited sites were not statically significant in the influence of use of SNSs on students' academic performance. It is worth mentioning that the researchers did not give any information about the number of students in the accessible population or how they accessed them. Also, there was no information about how they drew a sample from their accessible population and to how many students they gave the questionnaires. All of this missing information may limit the ability to generalize the results of this study to the target population.

Alwagait et al. (2015) conducted a quantitative study to examine whether there was a relationship between students' use of social media and their academic accomplishments. The researchers created an online questionnaire, which they distributed to student emails and also posted a link on a central notice board in order to reach a larger number of students. The questionnaire surveyed Saudi students' perceptions about their weekly usage of social media and investigated factors that students reported affected their academic performance, as well as identified the most common social media software used among Saudi students. The researchers collected 108 responses. The results revealed that the factors students reported impacting their academic achievements were a lack of time management skills, excessive use of social media, and watching soccer matches. Also, the study concluded that there was no correlation between the weekly usage of social media and student GPA. Finally, Twitter and Facebook were the most popular social media sites among Saudi university students.

Following prior research on the relationship between students' performance and the usage of social networking sites from student perspectives, Shahzad, Alwagait & Alim (2014), also conducted a mixed method study to investigate the same problem but, for triangulation purposes, included both faculty and student perspectives. For the qualitative part, the researchers conducted semi-structured interview with five Saudi faculty members. The quantitative part, which occurred first, included a questionnaire with 108 responses from university students. The findings were the same as in their previous quantitative study, which was that there was no correlation between student

usage of social media tools and Saudi students performance, except in cases of excessive social media use.

Implication of using social media in educational institutions. Embracing social media in pedagogical practices in educational institutions is associated with some implications that have to be considered. Institutions that would like to use social media must consider student evaluation and use policy commitments (Tarantino et al., 2013). They may need to redesign their assessment and evaluation plans to effectively measure the performance of students who are taught using social media (Hur & Oh, 2012). Furthermore, institutions should refine and update their policies in terms of academic integrity and determine standards for online interaction between educators and students (Chen & Bryer, 2012). These policies and planning should be explicit and highlight how social media platforms can be incorporated in the curriculum (Koh, Kin, Wadhwa, & Lim, 2011). Also, these policies should include important issues related to attitude such as commitment to good manners and respect for other students' posts (Tarantino et al., 2013).

In regard to financial commitment, institutions that want to adopt social media tools must be equipped with the technology and software needed for security. Also, they should take into consideration the cost of training their faculty to be familiar with these platforms before implementing them in classrooms (Tarantino et al., 2013).

Saudi Arabia at a Glance

Saudi culture. There are many different factors that influence the use of technology for learning. These factors are either related to the adopter, society,

institutional environment, or innovation. Before discussing these factors, there is a need to understand the Saudi cultural context where the college faculty will be teaching, in order to thoroughly understand the impact of these factors, as Saudi society has many characteristics that are different from other societies.

G. Hofstede and G. J Hofstede (2005) define 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, Shannak, Masa'deh, & Al-Jarrah, 2012). The influence of cultural values in accepting technology varies from one country to another. In order to obtain a profound understanding of factors that could be enablers or hindrances of faculty adoption of new technology, it is significant to take into consideration the impact of cultural factors (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. Cultural factors that have important contributions in constituting community culture include religion, language, and education (Sukkar & Hasan, 2005).

Since this study is related to Saudi Arabia, it is imperative to understand the influential Saudi cultural values that might influence their adoption of social media. Askool (2013) 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 the use of social media in Saudi Arabia.

According to Askool (2011), "Saudi society is considered as very conservative community" (p. 215). It is likely that this cultural specificity has an impact on the use of social media. In the Saudi education system, different genders are prohibited from studying in the same schools or colleges, based on religious reasons (Alebaikan, 2010). One example of this gender segregation is that each gender studies in their own schools and is taught by teachers of the same gender. In some cases, it is possible that female students may be taught by male teachers when there not enough female faculty members, but males only are taught by males (Alebaikan, 2010). Alsurehi 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, compared to Western countries. This is because in Saudi Arabia, tradition and values play a critical role in people's lives including social lives and educational communication practices (Alamri, 2016). One cultural aspect regards maintaining the privacy of women. This aspect can be viewed 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. Within the context of social media, however, social media in education may pose risks for the privacy of women by exposing them on social media platforms. As a result, those in academia and/or their families may not heavily use various kinds of social media.

With that said, another study, conducted by Alasfor (2016), is in conflict with the idea that gender affects the use of social media applications in Saudi universities. Alasfor conducted a study to explore the acceptance of integrating social media in educational settings. A total of 384 (200 female and 184 male) faculty across 28 Saudi universities completed an online survey. The findings showed that gender was not a significant factor in predicting faculty intention to utilize social media.

While looking at Saudi culture through the lens of cultural dimensions, Hofstede (n.d.) found Saudi people achieve a low score on the individualism dimension (25 out of 100), which means the Saudi people are a collectivistic society; 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 the communication between 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, Hubona, & Wang, 2007). People's intentions in counties 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 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, 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. Subjective norm is defined as a "person's perception that most people who are important to him think he should or should not perform behavior in question (Fishbein & Ajzen, 1975, p. 302). 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.

Social media in Saudi Arabia. According to Xanthidis and Alali (2014), more than 85% of Saudi residents use social media tools, which is considered a heavy level of usage. According to Go-Gulf (2016), Saudi Arabia occupies the seventh place globally in terms of the number of social media accounts, with an average of seven accounts for each user. In regards to Twitter penetration, Saudi Arabia has the highest levels in the world, as well as the highest YouTube consumption per capita (Global Media Insight, 2016). WhatsApp is the most popular social networking site in Saudi Arabia, followed by Facebook and Twitter with the usage rates of 22%, 21%, and 19%, respectively (Go-

Gulf, 2016). Forty percent of Twitter accounts in the Middle East and North Africa

(MENA) are from Saudi Arabia, while Twitter ranks fifth among the most visited sites in

Saudi Arabia. The average of tweeting is five tweets for each user per day (Go-Gulf,

2016). Figure 1 represented the penetration of social media in Saudi Arabia.
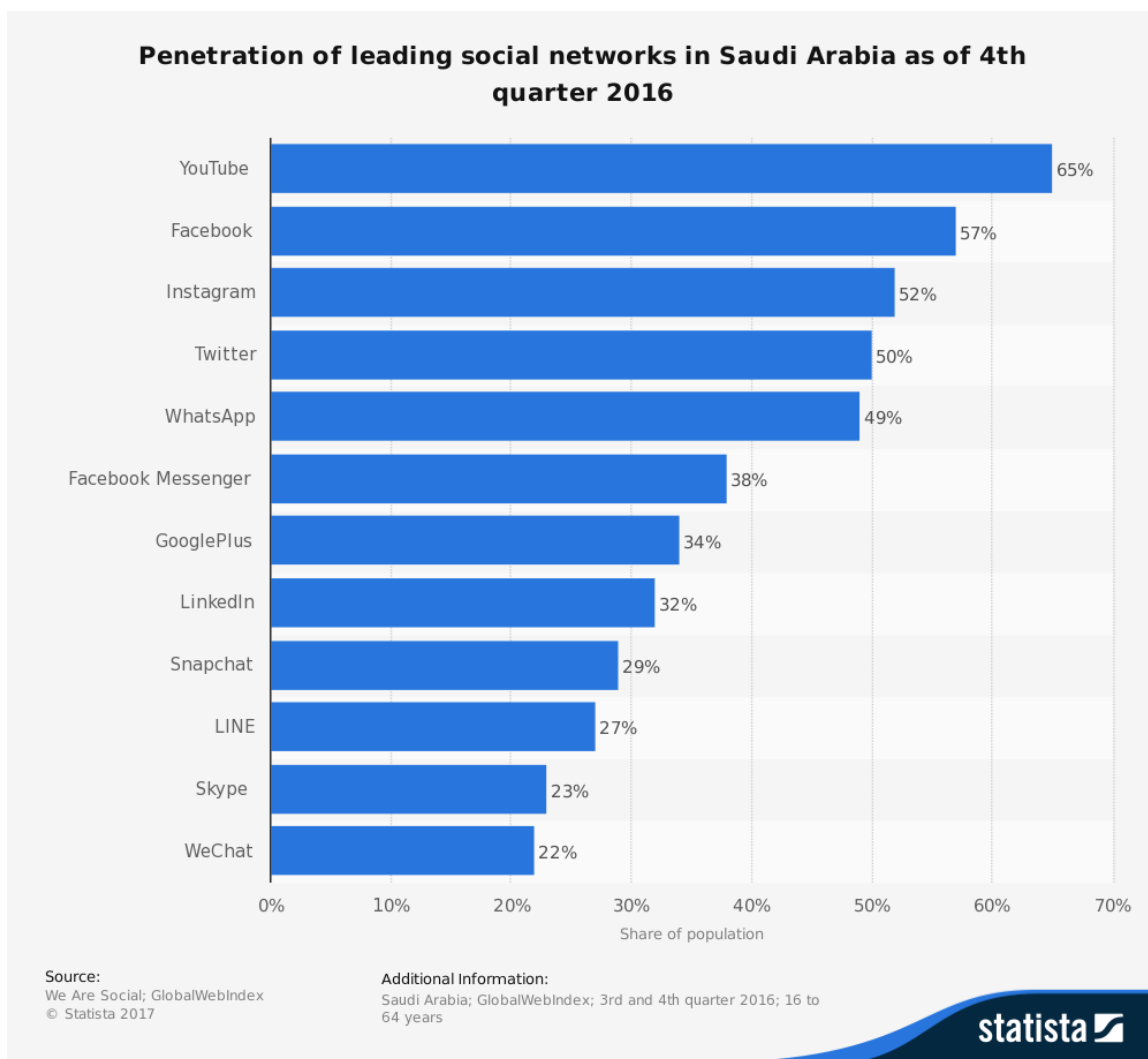
Figure 1. The penetration of social media in Saudi Arabia

In regards to Saudi universities, Ahmad, Hussain, and Aqil (2013) conducted a study to investigate the use of Web 2.0 among 24 Saudi government universities. The researchers reviewed the official websites of these universities and checked whether these websites adopted social media tools. Results showed that all Saudi universities except Northern Borders University and Al Baha University have official Facebook and Twitter accounts. YouTube and RSS feeds are the most commonly adopted social media in Saudi universities, while Flickr, LinkedIn, and Google+ are the least common tools. Five Saudi universities have adopted Flickr, four universities have adopted LinkedIn, and only two universities have adopted Google+. The Imam Abdulrahman Bin Faisal University has an active social media presence, with accounts on Facebook, Twitter, YouTube, and an RSS feed. It is worth mentioning that King Saud University is the only university that has a blog service (Ahmad et al., 2013).

Although the effectiveness of using social media for enhancing the educational process has been proved in the Western world (Alsurehi & Al Youbi 2014), employing social media properly in academic contexts in Saudi Arabia is not prevalent yet (Al-Daraiseh et al., 2014).

Theories Related to the Instructional Use of Social Media

The widespread of social media tools among students and the potential benefits of adopting these tools in teaching and learning educators have begun employing these tools for learning (Yakin & Tinmaz, 2015). This section previews some theories that explain how learning happens using social media. Being knowledgeable about these theories can assist educators to incorporate social media effectively and successfully in their teaching.

The uses and gratification theory. This theory is used to investigate how people use particular social media tools to fulfill particular needs. According to this theory, people may use a certain social media tool for different reasons based on their needs (Yakin & Tinmaz, 2015). This theory also examines what motives individuals or groups to use a specific form of media as well as what needs they gratify and the stratification they achieve from using these media tools (Yakin & Tinmaz, 2015). The most important aspect of this theory is the sources of users' motivations and their activities, which constitute key elements of the individual use of the tools (Yakin & Tinmaz, 2015). Based on this theory, people participate in online communities because they want to get certain values, benefits, and gratifications from those communities (Yakin & Tinmaz, 2015). Therefore, identifying the factors that affect that gratification is very important in meeting people's needs.

For example, the uses and gratification theory may be used to explain what people feel they gain by using social media. In fact, there are several significant indicators that impact learner gratifications in an online community, particularly in social media, including media content, interaction with the media, and the social system of utilizing the media (Katz, Blumler, & Gurevitch, 1974, as cited in Yakin & Tinmaz, 2015). Therefore, designers of social media websites have to take into consideration that there are different users using these websites in different ways and for different purposes (Yakin, I. & Tinmaz, H., 2015). For example, users use Facebook for different reasons, such as "convenience, information seeking, interpersonal utility, pass time, entertainment, escapism, peer identity, and social interaction" (Luo et al., 2011, p. 22).

Social network theory. There are many complicated tasks or activities that cannot be done individually. Therefore, we seek to divide them into small parts and distribute these small parts to many individuals instead of to one (Siemens, 2004). Later, we can link those many individuals in order to form a so-called network (Siemens, 2004).

According to Ethier (2006), a network is defined as "a set of objects, or nodes, and a mapping or description of the relationship between the objects" (p. 1). This theory is used to investigate the mappings connecting one person to others in order to assess how many friends this person has on a social network (Ethier, 2006). As the number of individual friends increases, the number of participations and trust of the online community will also increase (Ellison, Steinfield, & Lampe, 2007). For instance, the numbers of friends of a Facebook user is considered a robust indicator as to what extent this member belongs to an online community (Yakin & Tinmaz, 2015). The amount of influence and power of this Facebook user increases when the user has more connections on the social network.

Connectivism theory. According to Al-Shehri (2011), George Simens and Stephen Downes promoted the learning connectivism theory, which depends on "chaos, network and complexity, and self-organization theories" that constitute the premise of connectivism (Siemens, 2004, p.1). Based on this theory, learning occurs by establishing connections within networks.

According to Siemens (2004), networking technologies have recently begun to affect individual learning.

As an illustration, the advancements in Web 2.0 noticeably changed educational practices. Using Web 2.0, an individual can establish a network in order to reach information and knowledge at any time and from anywhere. Many collaborative tools allow users to build their learning via different knowledge bases that are not provided in a linear sequence.

Constructivism theory. This theory, developed by Jean Piaget (1967) (Bhattacharjee, 2015), describes how learning happens. It emphasizes how people acquire knowledge by constructing knowledge (Applefield, Huber, & Moallem, 2000). Based on constructivism theory, knowledge is not received by transmission; however, people build knowledge from the interactions between their different experiences (Applefield et al., 2000). When individuals absorb new knowledge, they integrate this new knowledge into the existing structure without altering that structure (Bhattacharjee, 2015).

Social constructivism is part of constructivism theory, whose foundations in educational environments were established by Vygotsky (1978) (Jones & Brader-Araje, 2002). Social constructivism depends on collaborative social interactions among students that form a deeper understanding of the subject matter (Applefield et al., 2000). Social media plays an important role in providing an appropriate environment for collaborative learning. Students with different backgrounds and different experiences can collaborate to enhance their comprehension.

Influential Factors Associated with the Use of Social Media for Learning

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. In this section, various studies will be reviewed to explore the most influential factors that influence people and educators' decisions to adopt social media. The reviewed studies will be categorized into three parts. The first part will consist of studies that conducted in non-Arab countries, while the second one will include studies that are relevant to Arab countries. The last part will shed light on motivational and hinder reasons associated with the use of social media platform among students.

Factors affecting the use of social media relevant to non-Arab countries.

Echeng and Usoro (2014) examined seven factors which 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 in 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 the analysis of interviews that were conducted with five faculty members and 16 students. Data was 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 researcher did not provide information about how the sample was selected was not provided. Using the correlation coefficient, the researchers

investigated the possible relationship between each one of the seven previously

mentioned factors with behavioral intention. Then, they investigated the correlation

between the behavioral intention and the participants' actual use of Web 2.0 tools. The

results suggested that all seven factors had significant positive correlations with

behavioral intention in Nigerian universities and the Scottish university, except for MTU,

which had insignificant correlation with behavioral intention in the Nigerian universities.

The researchers attributed having 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 a 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 decomposed theory of planned behavior model(DTPB), 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 U.S. 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 the data from 248 faculty members at one private university. Using the Pearson correlation coefficient, their results suggested that there are three factors which have a significant positive correlation with the use of social media, including 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 one other significant factor that had a negative significant correlation with the use of social media.

In 2013, Cao et al. conducted another study which also examined 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 included individual readiness; expected advantage; perceived risks; teaching confidence; social pressure from students, colleagues, or administrators; and future professional requirements. After revising the items based on the factor loadings, the researchers conducted multiple linear regression using factors scores derived from factor analysis as predictors. The regression models showed that variance inflation factors (VIF) were high

for expected advantages. VIF means that some predictors are highly correlated, and that in turn may influence the regression result. The two-correlated predictors were expected advantages and professional pressures (r = .72). Therefore, researchers conducted four regression models. 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 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 (2013) 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 (β = .5) and perceiving the benefits of using these applications for

learning (β = .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 (196 female and 90 male) preservice teachers. The findings stated that attitude (β = 0.74) and perceived behavior control (β = 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 (β = 0.04). This model accounted for 75.5% of variation in behavioral intention. Specifically, teacher attitude was significantly predicted by perceived usefulness (β = .596), compatibility (β = 0.198), and perceived ease of use (β = 0.16). Student influence (β = .36), superiors' influence (β = .353), and peer influence (β = .182) had positive impacts on teachers' subjective norms. Perceived behavior control was mainly influenced by self-efficacy (β = .668) and facilitative technology (β = .231). 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 in 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 toward 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 (POU), and enjoyment (E). The researchers used an online survey that was distributed to instructors in private universities who were randomly selected, receiving 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 EOU 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 as the most commonly used at 40%. Linear regression was employed to test the significance of the factors. Based on regression results, security had significant effect on PR (β = .352, p<.05), while privacy and trust had no significant effect. While both E and EOU had an insignificant effect on

Perceived Benefits, PU had a significant effect (β = .413, p<.05). PB, PE, and SN were found to significantly affect behavioral intention (BI) (β = .346, p<.05, β = .194, p<.05, and β = .32, p<.05), but PR did not (β = .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 (200 female and 184 male) faculty members 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 influenced faculty members' intentions, while complexity (p = .057), trialability (p = .629), and observability (p =.856) were not significant at .05 level. Moreover, the researcher concluded that there were no significant differences in faculty members' decisions to utilize social media that could be attributed to gender or age variables.

Using the modified version of the DTPB, Almeshal (2013) examined factors that affect faculty members' acceptance and adoption of social media for learning, 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 (β = .314 for RU and β = .331 for KSU), the use of social media in daily life (β = .31 for RU and β = .204 for KSU), and perceived behavior control (β = .29 for RU and β = .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 (β = .255 for RU and β = .075 for KSU). Since the influential factors were almost similar in both universities, the researcher 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 opinion toward adoption of technological innovation.

Factors affecting student adoption of social media. Peslak, Ceccucci, and Sendall (2012) conducted a study to explain and understand social networking behaviors by using TRA. A total of 196 students at different northeastern U.S. universities filled out a survey on their use of social networking sites. The results indicated that both attitudes toward using social networking websites and students' subjective norms had significant effects on their behavioral intentions to use social networking sites (β = .498, β = .215). Additionally, attitude had a positive relationship with student use of social media, while subjective norms did not influence students' actual use. In addition, behavioral intentions had a positive effect on adopters' use of social networking sites. The researchers recommended that instructors increase their students' adoption of social media applications by improving their intentions and perceptions of these applications.

In order to understand students' social media behavior, Al-Otaibi and Houghton (2016) conducted a study to examine students' perceptions about the pedagogical benefits of employing Web 2.0 tools for learning. In addition, they used the theory of planned behavior (TPB) and the DTPB to investigate influences that led students to adopt Web 2.0 tools. A total of 60 students from different universities in Australia participated in filling out a survey which showed that most of the respondents perceived the benefits of using Web 2.0 to enhance learning. Therefore, the results of this study may encourage institutions and universities to more fully implement Web 2.0 tools to meet students' needs. In term of understanding student behavior toward social media, attitude toward Web 2.0, students' subjective norms, and perceived behavior control were all considered strong determinants to predict student adoption of Web 2.0 ($\beta = .28$, $\beta = .26$, $\beta = .344$). This model explained 58.8% of variance in the behavioral intention. Beyond the impact of these three predictors, the researchers also investigated the antecedents of attitude, subjective norms, and perceived behavior control. The result found that perceived usefulness ($\beta = .41$) and compatibility ($\beta = .28$) were significant determinants of attitude. Peer influence was the only significant predicator for students' subjective norms ($\beta = .53$). Perceived behavior control was affected primarily by self-efficacy ($\beta = .66$). This study made clear the demands placed upon faculty members to integrate social media technologies in learning.

Utilizing the unified theory of acceptance and use of technology (UTAUT2) model, Harsono and Suryana (2014) surveyed 419 college students in Indonesia using convenience sampling techniques to identify constructs involved with adopting LINE

application, a social media technology for communication. The findings showed that the intention to use LINE was influenced positively by four factors, including facilitating condition (β = .015), effort expectancy (β = .475), social influence (β = .251), and habit (β = .156). Two other factors, performance expectancy (β = -.291) and enjoyment (β = -.063), had negative effects on the behavioral intention. Behavioral intention (β = .207), usage habit (β = .418), and facilitating conditions (β = .313) were significant predictors of actual use.

Looking at Saudi universities, Aifan (2015) examined factors that affect college students' attitude toward using social media in King Abdul-Aziz University, using her own model, which was designed based on several different theories, including social learning, diffusion of innovation, and TAM. This model assumes that usefulness, ease of use, experience in using social media, subjective norm, Saudi conservativeness, and age all impact students' attitudes toward using social media in their learning. Using an electronic survey, the researcher surveyed 510 students. The results showed that perceived usefulness (β = .63), subjective norm (β = .12), and perceived easiness (β = .11) were the significant predictors of student attitude toward using social media in learning. The findings also revealed that Saudi students perceived the benefits of using social medial tools for educational purpose and had positive attitude toward using them for learning. Moreover, there was a positive significant relationship between students' attitudes and their behavioral intention to use social media for their classes (r = .67).

Potential Influential Factors on Adoption of Social Media

Based on the literature review, there are many different factors associated with the adoption of social media. These factors are adopted from different technology models such as the TAM, TPB, and innovation diffusion theory. For the purpose of organization, the factors will be classified in several categories: factors related to the adopter, factors related to innovation, factors related to social influence, and factors related to the adoption environment.

Adopters' characteristics. This includes factors that are related to adopters' personal traits, such as gender, age, knowledge, and experience, and that may affect a person's choice to adopt social media (Corrocher, 2011).

Gender. The issue of gender differences in integrating technology for learning purposes has been found in in many research studies (Teo, Fan, & Du, 2015). However, based on the available literature, inconsistencies exist as to the influence of gender on the adoption of social media.

Wai, Ma, Hoi, and Yuen (2009) surveyed 186 pre-service teachers in one local university in Hong Kong and concluded that there were significant differences between the participants in their acceptance of technology, and that these differences could be attributed to gender. They suggested that the influence of the factors that affect behavioral intention and actual use differs based on gender; for instance, the result indicated that perceived ease of use had direct influence on females but a non-significant effect on males.

In another study which focused on utilizing the TAM, Teo et al. (2015) examined the determinants of the use of technology among pre-service teachers (169 male and 170 female) in a Southeast Asian country and investigated the effect of gender difference on these determinants. They found no statistically significant difference between males and females in the determinants, including perceived usefulness, attitude, and intention. The findings suggested that both male and female teachers showed similar perceptions, similar attitudes, and similar behavioral intentions toward using technology for learning. However, in regards to ease of use, the results showed an inequality between males and females. Females anticipated facing more difficulties when they used technology than did their male counterparts. Similarly, Elham (2013) found that faculty members' intentions toward using online Web applications for learning were not impacted by the gender of the faculty members. This result coincides with Alasfor's (2016) findings, which concluded that there were no significant differences in college faculty's decisions to utilize social media for learning across Saudi public universities that could be attributed to gender differences.

With respect to the possible impact of gender differences on social media adoption, Hargittai (2007) surveyed 1,060 college students at the University of Illinois and concluded that women had a greater tendency to use social media than males, which led to the conclusion that gender is a vital predictor for social media use. Similar findings were reported by Harsono and Suryana (2014), who surveyed 419 college students in Bandung to explain what elements affect the use of LINE. Their results showed that gender has a significant influence on a student's intention to use LINE, as women

showed greater behavioral intention to use LINE than men ($R^2 = 87\%$, $R^2 = 74.1\%$). In looking at the use of social networks in Singapore Lin, Chiu, and Lim (2011) went beyond examining the influence of adopters' characteristics such as gender to investigating gender differences after the adoption of social media. They concluded that after the adoption and use of social media, females had a more sustained usage of social media than their male counterparts. Males were more likely to stop using social media. Regarding time spending on social media, Wiese, Lauer, Pantazis, and Samuels (2014) revealed that female students in South African university spent around 33.47 minutes per day using Facebook, while their male counterparts spent approximately 19 minutes per day.

Conversely, through empirical study, Huang, Hood, and Yoo (2013) concluded that female college students showed less acceptance of certain social media tools (wikis, blogs, and video sharing) than their male counterparts due to having higher anxiety levels. However, for other social media tools (social networking and online video sharing), there was no difference attributed to gender. The researchers also pointed out that perceptions of using social media for learning purposes differed among college students based on their gender. Further, college students, regardless the gender, did not perceive the potential of certain social media applications such as social networking and online game as educational tools for enhancing their learning. In conclusion, based on the literature, the impact of gender differences on the adoption of social media is still undetermined.

Age. Age is considered to be one of the factors that affects the acceptance of

innovation (Corrocher, 2011). According to Rogers (2003), one characteristic of early

innovation adopters is that they are young people. The findings of Lin et al. (2011)

corroborate Rogers's (2003) argument. They examined the influence of age difference on

the use of social networks in Singapore among Internet users and workers. The findings

revealed that age was the most significant predictor of the use of social media among the

characteristics studied. Younger people were more likely to use and continue to use social

media than older people. This finding was also consistent with Corrocher (2007). By

combining the diffusion of innovation model (DOI) and the TAM, Corrocher (2011)

examined factors that influence the use and intensity of the use of three different

categories of social media by looking at the characteristics of adopters and innovations.

Corrocher found that age played a significant role in determining the adoption of

intensity of use of social media bookmarking and networking. The users of social media

bookmarking were found to be older than the users of social networking. On the other

hand, Elham (2013) found age did not significantly predict faculty members' intentions

to use web application in learning.

Habit. Verplanken and Aarts (1999) defined habit as "learned sequences of acts

that have become automatic responses to specific cues, and are functional in obtaining

certain goals or end states" (p. 104). Individuals' behavioral intentions toward adopting a

new IT system are a product of reasoned evaluation of the knowledge they have and of

habitual prior use of the system (Gefen, 2003). On the other hand, according to Polites

(2009), the most common models, such as TRA and TAM, use a behavioral intention of

acceptance of new systems that can only be predicted by conscious predictors and cannot be controlled by unconscious thoughts. Recently, models that use subconscious factors such as habit, such as UTAUT2, have emerged. The exploratory benefits of incorporating habits in behavioral models to predict acceptance of new technology model have been demonstrated in several studies (Harsono & Suryana, 2014; Venkatesh, Thong, & Xu, 2012).

Pahnila, Siponen and Zheng (2011) conducted a study to predict people' acceptance of the use of Tabao, an online Chinese shopping website, using two different versions of an extended UTAUT model. The main difference between the two versions was that one of the models integrated the habit factor to determine which model would explain more variance in the use of Tabao. The results reveled that integrating habit in the UTAUT model significantly increased the explanatory power model. The version of UTAUT without habit explained 29.9% of the variance in the actual usage, while the second model that included habit accounted for 39.4%. As a result, the authors recommended that in order to increase the adoption of a new system, the role of habit should be taken into consideration. This was endorsed by Gefen (2003), who demonstrated that habit is an additional power that enforces the individual's intention to sustain the use of a technology.

Similarly, Venkatesh at el, (2012) extended the UTAUT model by integrating three new factors, including habit, price, and motivation, to enhance the understanding of consumer acceptance of technology. The results suggested that UTAUT accounted for 56% of the variance in intention and 40% of the variance in the actual use of the

technology. 74% of the variance in the consumer intention's and 52% of the variance in the consumer use of technology were explained by extended UTAUT. In respect to habit, it appeared that habit significantly affected the use of technology both directly and indirectly through behavior intention. Further, utilizing the UTAUT2 model, Lewis, Fretwell, Ryan, and Parham (2013) examined factors that facilitate and inhibit faculty members' acceptance to adopt technology in classrooms and found that habit had a positive significant correlation with behavior intention.

In terms of social media, Harsono and Suryana (2014) empirically found that habit had significant positive relationships with both behavioral intention (β = .418) for using LINE and the actual usage (β = .156). Further, Cao et al. (2013) confirmed that the familiarity of faculty members with social media tools before using them for learning was the main factor that facilitated their adoption of them to enhance students' leaning.

Attitude. Fishbien and Ajzen (2011) defined attitude as "a latent disposition or tendency to respond with some degree of favorableness or unfavorableness to psychological object" (p. 76). Many studies have shown the significance of potential users' perceptions in predicting behavioral intentions toward using social media (Ajjan & Hartshorne, 2008; Osorio & Papagiannidis, 2014; Peslak et al., 2012).

Osorio and Papagiannidis (2014) found that attitude was the most important construct that influenced potential users' decisions to adopt a new social media platform (β=1). The researchers went further to find factors which affected attitude, with perceived usefulness discovered to be the most significant. In a related study, Peslak et al. (2012) stressed that attitude is a very important element in predicting an individual's behavior in

adopting social media networks. They used the TRA model to explain social media behavior among college students in U.S. universities, showing that student attitudes toward the using of social network websites had a positive significant relationship with both students' intentions and their actual usage of social media. The more positive attitude a student had, the more likely it was that he or she would intend to use social media. Thus, in order to increase students' intentions and use of social media, instructors have to improve college students' perceptions about the potential benefits of employing social media platform for educational purposes. Similarly, in Saudi Arabia, Aifan (2015) found attitude was a significant predicator associated with students' intentions to use social media, accounting for 67% variance in students' intentions.

In regards to faculty members, Tyagi (2012) conducted a study to understand university instructors' adoption of Web 2.0 technologies to enrich students' learning across six universities in India. The researcher concluded that faculty attitude and perceived behavior control were associated with faculty intentions to utilize social media.

Perceived behavior control (PBC). PBC refers to "people's perceptions of the degree to which they are capable of, or have control over, performing a giving behavior" (Fishbein & Ajzen, 2010, p. 64). PBC is related to all needed skills, knowledge, and resources that facilitate performing a behavior and to the expected difficulties that may hinder performing a behavior (Fishbein & Ajzen, 2010). According to Cao and Hong (2011), in order to effectively adopt social media in higher education, faculty concerns regarding technological resources, training time, and money have to be addressed.

In the same context, Cao et al. (2013) examined motivational determinants of faculty decisions to adopt social media for teaching in a private university in the United States and found that readiness with social media was the strongest factor in influencing the intention to use social media in the future (r=.578). They concluded that when a professor is familiar with using social media tools and knows how to use them, he or she is more likely to adopt these tools in his or her teaching.

In terms of self-efficacy, Ajjan and Hartshorne (2008) used the DTPB to examine faculty members' adoption of Web 2.0, finding that self-efficacy ($\beta = .517$, $p > .001$) was the most important predictor for perceived behavior control and that perceived behavior control was also a significant predictor for faculty members' behavioral intention ($\beta = .127$, $p > .05$). Likewise, Cao et al. (2013) confirmed the importance of self-efficacy in affecting faculty members' decisions to integrate social media in their practices. Through empirical study, they found that professors who had more teaching self-efficacy were more likely to use or plan to use social media for learning. This result is consistent with the findings of Sadaf et al. (2012), who found that teachers' self- efficacy was the main determinant of perceived behavior control ($\beta = .668$). They found also that facilitating technology ($\beta = .231$) was a significant predictor for perceived behavior control, while facilitating resources was not significant ($\beta = -.024$).

Innovation attributes. This includes factors relevant to the technical features of social media, such as usefulness, risk, and ease of use, and explains how these factors differ from one adopter to another based on their perceptions about the innovation (Corrocher, 2011).

Perceived usefulness. Perceived usefulness refers to "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p.320). *Relative advantage* in innovation diffusion theory (IDT), *job-fit* in the model of PC utilization (MPCU), *extrinsic motivation* in the motivational model (MM) and, to some extent, *performance expectancy* in the unified theory of acceptance and use of technology (UTAUT) all pertain to each other (Venkatesh, Morris, G. Davis, & F. Davis, 2003). Perceiving the benefit of a new technology is considered a significant factor for predicting the adoption of this technology (Davis, 1989). There are many studies which demonstrate the importance of this factor in predicting people's intentions to adopt technology (Aifan, 2015; Hartshorne et al., 2010; Osorio & Papagiannidis, 2014; Sadaf et al., 2012).

Motivation. There are two different kinds of motivation, intrinsic and extrinsic. Intrinsic motivation is defined as "the performance of an activity for no apparent reinforcement other than the process of performing the activity per se" (Davis, Bagozzi, & Warshaw, 1992, p. 1112), while extrinsic motivation refers to "the performance of an activity because it is perceived to be instrumental in achieving valued outcomes that are distinct from the activity itself" (Davis et al, 1992, p. 1112). Based on this dichotomy, perceived usefulness is considered to be the extrinsic motivation, while enjoyment is the intrinsic motivation (Davis et al, 1992). According to Teo, Lim, and Lai (1999), motivation scholars purported that intrinsic and extrinsic motivation are considered significant determinants of an individual behavior. Hence, an individual adopts a new technology because it adds pleasure to its users as well as enhances their performance. It

is worth mentioning that extrinsic motivation has been found to have more impact on individual behavior than intrinsic motivation (Corrocher, 2011, Davis et. al, 1992; Teo et al., 1999).

Davis et. al (1992) examined the influence of intrinsic and extrinsic motivations in using a computer in the workplace. They showed that people's intentions were impacted mainly by the perceptions they held regarding the benefits of using a computer in enhancing job performance and were impacted to a lesser extent by the enjoyment they yielded during the use of computers.

In terms of social media, it is reasonable to claim that the enjoyment that social media users experience affects their intensity of use (Corrocher, 2011). Jairak, Sahakhunchai, Jairak, and Praneetpolgrang (2010) explored factors that influence an individual's choice to adopt social media for collaborative learning, showing that enjoyment and achieving a high level of performance were significant factors that affected the intention to use social media websites for learning. Furthermore, Corrocher (2011), through empirical study, found that extrinsic motivation, particularly job-related motivations, impacted the intensity of using social media. Lin and Liu (2012) asserted that both social motivation, such as staying in touch with friends in social media, and non-social motivation, such as reviewing the news, are key factors in impacting the use of social media.

Compatibility. Compatibility refers to the extent to which an innovation is consistent with an adopter's existing values, prior experiences, and social system (Rogers, 2003). Cao et al. (2013) found that compatibility had a direct effect on the use of

social media. When faculty members perceive that using social media will fit well with their teaching style, this perception will motivate them to use social media in educational settings. Further, Ajjan and Hartshorne (2008), using the DTPB, found that compatibility had a positive influence on attitude (β=.190), which had a positive impact on behavioral intention. Professors will have a positive attitude toward using social media tools when they fit with their teaching methods.

   Perceived ease of use. According to Davis (1989), this is defined as "the degree to which a person believes that using a particular system would be free of effort" (p. 320). According to Venkatesh et al. (2003), constructs such as *effort expectancy* in UTAUT, *complexity* in MPCU, and *ease of use* in IDT are very similar to each other. According to Davis, (1989), ease of use is considered a significant determinant for predicting an individual's use of new technology, in addition to perceived usefulness. Even if an individual perceives that an innovation will perform a better job, the extent to which an individual perceives an innovation to be very difficult to use or need a certain knowledge base is also considered another significant determinant in regards to adopting the innovation (Davis, 1989). Just as the simplicity of technology facilitates the adoption process of an innovation, the complicity of a technology hampers this process, because it requires more effort at the individual and institutional level to ensure successful adoption (Corrocher, 2011). There are many empirical research studies which demonstrate the importance of ease of use in predicting an individual's use. According to Jairak et al. (2010), ease of use is one of the main factors that motivate social media users to employ social media for educational purposes. Echeng and Usoro (2014) examined factors that

could impact integrating social media tools in academic settings in Nigeria and Scotland. Their findings suggested that besides other influential factors, perceived ease of use was a significant predictor for faculty intentions to use social media for instructional purposes.

Schlenkrich and Sewry (2012) claimed that the inappropriate use of social media may cause threats for an institution and therefore suggested a set of factors that could lead to successful adoption of social media for learning. One of these factors that had a large correlation with proper adoption of social media was usability (r = .498). Therefore, to ensure the ideal use of social media, the adopted social media technology has to be easy to use and provide benefits to the potential user.

Privacy risk. Social media has been widely adopted across different sectors, including business, marketing, education, medicine, and politics. Despite the benefits of using social media tools for learning, using social media involves some risks related to users' privacy. With large and growing numbers of social media users, the concern of violating a user's privacy has been raised (Gupta & Dhami, 2015; Mutula, 2013). Information privacy refers to "the ability (i.e., capacity) of the individual to control personally (vis–à–vis other individuals, groups, organizations, etc.) information about one's self" (Stone, Gueutal, Gardner, & McClure, 1983, p. 2). Since the users of social media might lose control over their information, their privacy may be violated and their confidentiality may be breached (Lunday, 2010) when their personal information is used by advertising companies without their knowledge or permission (Gupta & Dhami, 2015; Mutula, 2013). Also, according to Gupta and Dhami (2015), social network websites recorder all users' transactions for the purpose of data mining; therefore, having privacy

in social media is not anticipated (Almadhoun, Dominic, & Lai, 2014; Schlenkrich & Sewry, 2012). In addition, the users of social media could be vulnerable to various online crimes such as account theft, identity theft, spamming, and harassment by computers hackers (Mutula, 2013).

According to Dwyer, Hiltz, and Passerini (2007); Featherman and Pavlou (2003); Lee (2009), and Lin and Liu (2012), privacy risks are considered a factor that adversely affects an individual intention to adopt information technology and social media. Therefore, the existence of such threats to privacy may affect the intention of an individual to adopt social media for learning. Moran, Seaman, and Tinti-kane (2011) surveyed 1,920 faculty members, with the largest group of participants (70%) stating that privacy risk inhibited their use of social media for teaching purposes.

In the same way, Gupta and Dhami (2015) carried out a study to investigate the influence of privacy concerns, security, and trust on the behavior of using social media, particularly Facebook. The results indicated that perceived privacy and perceived security were significantly positively related, both with each other and with perceived trust. When the level of security increased, the desire to protect privacy also increased, and vice versa. They also found that when Facebook users believe that they have control over their personal information and that their information is protected, their trust in Facebook will increase. Therefore, both perceived privacy and perceived security determinants are considered as significant predecessors of perceived trust. Furthermore, the researchers found that trust had a positive relationship with sharing information on Facebook. In terms of the direct influence of perceived privacy on sharing information, the results

indicated that there was no direct effect of perceived privacy on sharing information on Facebook; however, privacy affected trust and trust affected sharing information. This result was supported by Schlenkrich and Sewry (2012), who examined 587 students who were not users of Facebook and concluded that privacy and security services provided by social media software are the main factors that lead to successful adoption of social media in higher education.

Therefore, in order to successfully integrate social media in an academic context in higher education, faculty and students' concerns regarding the issues of privacy have to be addressed (Schlenkrich & Sewry, 2012). College faculty and students have concerns about their personal information and who reviews their profiles. These concerns might be alleviated by using social media tools that provide a safe environment and more security settings for their users to ensure their information is secure (Schlenkrich & Sewry, 2012).

However, several other empirical studies concluded that the relationship between privacy risks and the use of social network websites is weak or non-existent. R. Jairak et al. (2010), adapted the technology acceptance model (TAM) to develop their own theoretical framework. They concluded that the intention of using social media for learning purposes and general usage is strongly impacted by trust and being task-oriented and pleasure-oriented. They also concluded that privacy concerns and security were not a significant factor that could influence the intention of using social media for learning, general usage, or marketing. Similarly, Lin and Liu (2012) stated that few empirical studies demonstrated a direct relationship between privacy concerns and the use of social media. They conducted a study to examine the influence of three factors, including

motivation, trust, and privacy concerns, on using social media websites. The results suggested that motivations and trust are two important factors that reinforce the use of social media, while privacy concerns were not the key factor in determining its use. However, privacy concerns were negatively correlated with trust, which can play a vital role in reducing privacy concerns.

Likewise, Almadhoun et al. (2014) carried out a study to examine the impact of users' perception of security and privacy on their use of social media. The result showed that perceived security and perceived privacy did not affect the use of social media or sharing information. Thus, the researchers concluded that the users of social media have only slight concerns about their privacy. They are willing to reveal a large amount of their personal information without being aware of privacy and security settings or who can browse their profiles (Almadhoun et al., 2014).

Interestingly, Dermentzi et al. (2016) found that academics' intentions of using online technology could be predicted by privacy control. However, privacy control did not significantly predict academics' intentions toward using social media. The researchers attributed that to the fact that academics do not upload their works to social media because they are very concerned about copyright and plagiarism issues. Also, they do not disclose any important personal information in these platforms, which means that academics do not trust social media. As result, it is normal if academics are not concerned about privacy in social media, because there is no important information there (Dermentzi et al., 2016).

It is worth mentioning that the perception of privacy concerns varies from one country to another and from one culture to another. Since privacy has a high priority in Saudi society due to cultural values (Al-Daraiseh et al., 2014), it is reasonable to argue that Saudi users of social media require high levels of privacy that cannot be guaranteed by social media developers. Therefore, privacy risks may negatively affect the use of social media. Alsurehi and Al Youbi (2014) examined 42 Saudi students' perceptions about their concerns regarding integrating social media in instruction. The finding revealed that the most prevalent concern that students, particularly females, had regarding using social media was privacy and security. As a result, students' concerns about privacy have to be addressed by educational institutions.

However, Saudi people's behaviors do not reflect their concerns about their privacy. Alsagri and Alaboodi (2015) assessed Saudi society's perceptions about their levels of privacy concern. This study included 455 participants (120 males and 335 females) who completed an online survey. The findings claimed that the Saudi community has a high level of concern about their privacy on social media. However, 32% of the participants reported they share their personal information, 30% of the participants were neutral, and 38% were unwilling to share their information on social media. Similarly, Al-Daraiseh et al. (2014) surveyed 510 users of Facebook and Twitter to explore their trust in these social media technologies. The findings indicated that the social media profiles of 43% of people who participated in the study were public, while 25% of the participants were not aware of their profile setting. Moreover, this study

found that the majority of the participants in this study shared large amount of information and never read the privacy policy.

As seen above, there has been no agreement on the impact of privacy concerns on the use of social network websites. One potential explanation is the possible existence of other factors that may counteract the impact of privacy concerns, such as motivation and enjoyment, or it might be because social media users have varying levels of trust in social network providers or social network users (Lin & Liu, 2012).

Perceived trust. Trust is defined as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer, Davis, & Schoorman, 1995, p. 712). In face-to-face relationships, trust is considered a critical determinant for successful interactions and building relationships between people (Lewis & Weigert, 1985). In online environment, trust in social media websites and their users is considered a very critical factor that influences the use of social media and sharing information (Almadhoun et al., 2014). However, according to Al-Daraiseh et al. (2014), the level of trust in social media websites should not be high, because social media tools do not provide a safe environment. In order to register on these social media platforms, users have to disclose their personal information, such as their name, contacts' information, and their location. Since the level of privacy and the level of security provided by the majority of social media networks are weak, it is expected that there is violation of users' privacy or identity thefts (Al-Daraiseh et al., 2014). These social networks do not verify their normal users'

accounts, and the security settings are set by default on minimum privacy level, although registration in these social media websites requires providing accurate information about name, location, and date of birth. Al-Daraiseh et al. (2014) reported that social media networks are a fertile environment for fraud and abuse. Therefore, Al-Daraiseh et al. (2014) recommended that before registering on any social media websites, people have to think about whether they trust these social websites to keep their information safe or not.

Similar findings of Almadhoun were also suggested by Salahshour, Dahlan, Iahad, Nilashi, and Ibrahim (2015), who investigated influential factors that impact the intention to adopt social media websites using a multi-criteria decision making (MCDM) approach. The findings revealed that trust, performance expectancy, and security are the key factors that impact people's intentions to adopt social media websites. Similarly, Jairak et al. (2010) empirically examined factors associated with intentions of using social media for collaborative learning among 300 people who already used social media. The results showed that perceived usefulness, perceived easiness, perceived enjoyment, and trust-based familiarity with the system usage were the most influential factors that shaped the participants' intentions. Likewise, Osorio and Papagiannidis (2014) confirm the importance of trust in influencing people's intentions to use a new social media technology through attitude and perceived control. Through empirical study, they found that trust had a positive significant relationship with attitude (β = .118), and a negative relationship with perceived control (β = -0.186). Since the perceived control had a negative relationship with intention and trust had a negative relationship with perceived control, trust had an indirectly positive relationship with intention. Thus, to improve the

likelihood of users adopting a new social media technology, the new technology's developers have to provide some information about how this technology will deal with users to gain their trust. Also, the developers have to provide something different in terms of trust that has not yet been provided on other social media platforms.

On the other hand, according to Dwyer et al. (2007), trust is not as significant of a factor that influences sharing information in online environments as it is in face-to-face relationships. The researchers compared students' perceptions of trust and privacy and the influence of their perceptions in sharing information and building new friendships on Facebook and MySpace. Although the researchers found that the students had a weaker trust in MySpace, MySpace members showed significantly higher experiences in developing new relationships. Therefore, the researchers stated that people in online environments build relationships with others, even though the perceived security and trust in social networking sites are weak.

Lin and Liu (2012) argued that some previous studies, which found trust and privacy concerns to not be significant factors in using social media, examined the influence of privacy concerns and trust on the use of social media as two separate issues. Lin and Liu (2012) tested the effect of privacy risk and trust on the use of social media websites. Using hierarchical regression, they noted that when trust is added to the regression model, privacy concerns are no longer significant predictors for the use of social media. They conclude that trust is strongly negatively correlated with privacy concerns, and the use of social media websites is positively affected by trust.

In the Kingdom of Bahrain, which has a similar culture to Saudi Arabia, Alrayes and Ali (2016) examined the most significant factors toward accepting social media platforms among faculty in higher education. The researchers received 134 valid responses by distributing an online questionnaire to instructors in private universities, who were selected randomly. The findings suggested that at least one Web 2.0 tool was used by 59% of the instructors. Blackboard was the most common social media tool used by instructors. Using multiple linear regression, the result showed that security had significant effect on perceived risk ($\beta = .352$, $p<.05$), while privacy and trust were not significant. Also, perceived risk did not predict instructors' intention ($\beta = .006$, $p>.05$).

In regard to the Saudi context, Saudi society is very concerned about privacy issues, especially with females (Alsurehi & Al Youbi, 2014). However, these concerns could be decreased if social media providers were to offer more security options for their users (Schlenkrich & Sewry, 2012). Also, faculty should choose social media tools that provide more control for their users, beside their educational benefits, in order to increase students' trust in these tools (Schlenkrich & Sewry, 2012). It is obvious how privacy, security, and trust are interrelated. Since social media users worry about their online privacy, they should use social media websites that address their concerns by providing privacy policies and advanced security features. Online users trust social media websites that care about their users' privacy.

Social factors. One of the most important social factors that is adopted in different models such as TRA and TPB is subjective norm. According to Fishbein and Ajzen (1975), subjective norm is defined as "[a] person's perception that most people

who are important to him think he should or should not perform behavior in question" (p. 302). In the context of using social media in higher education, there are three different groups that may motivate or demotivate professors to adopt social media, including students, peers, and administrators. Cao et al. (2013) examined motivational factors that cause faculty members to incorporate social media in their teaching. The results revealed that one of the significant factors that motived college faculty to use social media was pressure raised by students, peers, and/or supervisors. This result coincides with Ajjan and Hartshorne's (2008) findings, in which students, peers, and superior had significant influence on faculty members' subjective norm. However, subjective norm had no significant effect on the adoption decision of Web 2.0.

Facilitating condition. Facilitating condition is defined as "the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system" (Venkatesh et al, 2003, p. 453). Based on the literature, there are different potential factors related to facilitating condition that affect the faculty members' intentions to employ social in learning. These factors, including use policy, technological resources, Internet connection, and training, play a critical role in facilitating the adoption of social media.

Internet connection. Using social media requires having an Internet connection. A lack of Internet connection or having a poor connection will negatively affect the use of social media for learning. According to Corrocher (2011), the quality of Internet connections plays a main role in encouraging people to use social media. She argued that

having high speed Internet is very critical for using online video sharing that requires

more broadband width for downloading and uploading video files.

   Training. A lack of training is considered to be one of the main faculty concerns

about using social media for teaching (Moran et al., 2011). Cao et al. (2013) emphasize

the importance of training faculty to teach effectively using social media. They found a

lack of training negatively affected university faculty members' intention and usage of

social media, and as a result, they suggested that university and colleges should provide

ongoing training for their faculty members to raise their teaching efficiency using social

media tools. In other empirical study, Okello-Obura and Ssekitto (2015) advocated for

conducting workshops, conferences, and seminars to enhance colleges instructors'

awareness about the potential of integrating social media for learning as well as providing

them with practical training to employ social media for teaching purposes. Similarly,

Daher and Lazarevic (2014) confirmed the significance of providing technology support

for instructors to incorporate social media tools in educational settings when they found

instructors who received appropriate training in using social media were more likely to

incorporate them in their instructions. They concluded that a lack of training is

considered the core barrier that hampers the use of social media.

   Time. Using social media platforms requires time to learn and practice for

effectively integrating them into teaching methods (Cao et al., 2013). Based on a survey

of 1920 faculty members conducted by the Babson Survey Research Group and

Converseon, the majority of the participants stated that they considered social media

technologies to be time consuming (Moran et al., 2011). Comparing the benefits that

would be acquired using social media in learning with the time they would need, the majority of participants stated that using social media was not worth the time it would consume (Moran et al., 2011). Similarly, Okello-Obura and Ssekitto (2015) reinforced, through an empirical study, that time constitutes a major challenge in using social media in higher education. For example, preparing a class lesson that uses social media consumes a considerable amount of time and requires adequate practice to achieve the desired goal behind the adoption.

Institutional policy. In addition to the inherent security risks in social media mentioned above, adopting social media in an institution may entail some risks. The misuse use of social media tools constitutes real risk that could lead to serious consequences (Almeida, 2012). There have been different stories of teachers and employees who were fired because of what they posted on Facebook or Twitter in Saudi Arabia. For example, one teacher in Saudi Arabia was fired because he tweeted some tweets that included abuse of the Kingdom of Saudi Arabia (Alsharani, 2016). In order to proactively respond to social media risks, organizations must formulate their own policies (Almeida, 2012). Besides using technological security solutions such as installing anti-virus programs or customizing browser settings, creating and implementing information technology policies will delimit the risks and allow the secure inclusion of social media (Almeida, 2012). Organizations that engage in social media have to design their own comprehensive policy (N. Barnes & F. Barnes, 2009). According to Clarke and Flaherty (2010), "in addition to avoiding legal entanglements, social media policies can help faculty understand their unique role for engagement, protect the institutional voice, and

safeguard the departmental reputation" (p. 275). The main benefit of creating a policy is protecting the rights of others and ensuring their privacy. It protects the users of social media, whether faculty, student, or staff, in terms of copyright and intellectual property violation. Also, adopting policy manage communication behaviors between student and faculty (Lenartz, 2012). Since personal use of social media might affect professional use, there is a need to differentiate between using social media applications for personal purposes and professional purposes (Campbell et al., 2016). Policy explains how professional discussions in social media should be in terms of discussion topics, showing respect, and tone. Moreover, policies tackle issues related to confidentiality and privacy.

So, institutions administrators have begun regulating security policies in order to govern the use of information technology resources in their organizations (Almeida, 2012). When there is a policy, the users of the specific social media, whether students, employees, or professors, will know their boundaries; they will know what things are allowed to be published and what is not allowed. However, in higher education, many universities do not have policies for the use of social media, so the lack of a clear policy for the use of social media may discourage faculty members from using social media in their teaching.

Holder-Ellis (2015) conducted a qualitative study to identify factors that can be enablers or hindrances for pedagogical usage of social media at Walden University. The researcher conducted interviews with ten instructors at the university. The result suggested that a lack of policies regarding the use of social media was a significant factor that negatively affected integrating social media platforms in academic settings.

Likewise, Alsurehi and Al Youbi (2014) suggested that in order to promote the adoption of social media among females, Saudi universities and colleges need to provide preventive measures such as privacy policies that address females' concerns.

Okello-Obura and Ssekitto (2015) found that the majority of faculty who participated in a study conducted to identify factors that inhibit the use of Web 2.0 applications in teaching at Makerere University stated that it is imperative to have an effective policy to control the use of social media. Browsing through all the Saudi public universities' websites, none of them have a policy for using social media. As a result, the lack of a clear policy for the use of social media may discourage faculty members and students from using social media for learning (Campbell, 2016).

One Saudi government initiative to protect Internet users is its endeavor to monitor and set restrictions on visits to websites. Also, in 2007, the Saudi government realized the importance of keeping up with modern technology developments, so it established the Anti-Cybercrime Law to achieve information security for individuals and society and reduce the misuse of information systems. This system set serious penalties for committing cyber crimes (CITC, 2007). According to the Anti-Cybercrime Law, Article VI, 800,000 USD and/or imprisonment for a period that does not exceed five years are the penalties for anyone who commits cyber crimes (CITC, 2007). Cyber crimes include the following:

- Production, preparation, transmission, and storage of material impinging on public order, religious values, public morals, and privacy through the information network of computers.

- The preparation, publication, and promotion of material for pornographic or gambling sites which violate public morals.

- The construction or publicizing of a web site on the information network or computer to trade in, distribute, demonstrate method of use or facilitate dealing in narcotic and psychotropic drugs (CITC, 2007, p. 9).

Although the Communication and Information Technology Commission (CITC) in Saudi Arabia established the Anti-Cybercrime Law to achieve information security for individuals and society and to reduce the misuse of information systems, Saudi educational institutions have to create their own policies for integration social media in academics setting. Kon, Kin, Wadhwa, and Lim (2012) stressed the importance of enhancing guidelines regarding embracing social media in pedagogy. These policies must be very clear and explain how social media platforms can be effectively used to support pedagogy. These policies and planning should be explicit and highlight how social media platforms can be incorporated in the curriculum (Koh et al., 2012).

In order to create an effective policy, Almeida (2012) recommended several guidelines should be taken into consideration by leaders and policy makers. To begin with, people who are responsible for formulating policies have to consult with all involved stakeholders prior to adopting the policies, so polices have to be understandable and leave no room for interpretation. Second, all people who intend to use or already use social media must be informed about these policies and all stakeholders who will use social media should be required to sign an acknowledgment of the policy. In short,

individuals should read the policy carefully, and organizations must clearly explain their policies for their employees.

Campbell et al. (2016) stated that policy has to be updated continuously to keep pace with the emergence of social media applications. Also, giving the fact that Saudi Arabia is a religious country, social media policies should be confirmed by Islamic teaching in order to be enforced (Alkhalifah, 2014). Also, these policies should include important issues related to appropriate communication behaviors, such as commitment to good manners and respect for other students' posts (Tarantino et al., 2013).

As mentioned above, creating an institutional policy as a proactive step to protect the students, faculty, and staff is considered wise. However, there is the potential that institutional policies may have an adverse impact on using online technology, particularly in Saudi Arabia. When faculty members see these restrictions and penalties about the misuse of social media, they may be fearful and be intimidated (Galante, 2015). As result, they will make the decision to not use social media, particularly since using social media in universities is fully voluntary.

According to Siau, Nah, and Teng, (2002) "policy should not be so restrictive that it gets in the way of productive exploration or suffocates employees" (p.78). Lenartz (2012) through empirical study, examined the use of social media by college faculty and administrators at a community college in United States. Lenartz found that some college faculty were opposed the idea of creating a policy because having a policy will restrict and decrease faculty and student use of social media. So, as result of these restrictions, students will look for other mediums this provide more freedom.

Theoretical Framework

Echeng and Usoro (2014) stated that "the acceptance of technology has been a challenging issue in information systems research for a long time" (p. 10). Identifying and understanding factors that may hinder or facilitate the use of social media in education setting is very crucial (Echeng & Usoro, 2014). Understanding determinants that affect potential users' intentions and adopting of technology will increase the effective deployment of technology usage in institutions (Tyler & Todd,1995). Identifying these influential factors will assist institutions' decision-makers to support the motivational factors and eliminate or reduce the inhibitory factors which will lead to more adoption of information technology. In fact, there are many different factors influencing the use of technology for learning. These factors are either related to adopter, society, institution environment or innovation. So, several theories have been revealed to explain and understand the determinant of technology usage (Tyler &Todd, 1995).

In order to understand an individual usage behavior, one significant line of studies has utilized an intention as a key element to predict an individual technology use; thus, these studies focused on the determinants of the antecedents of individual's intention such as attitude and social factors (Davis,1989). This stream of studies depends on intentions models such as the theory of reasoned action (TRA). According to Tyler and Todd (1995), one example of a theoretical framework that emerged from this stream of research is Technology Acceptance Model (TAM) that was designed by Davis in1989. The TAM model adapted the TRA model by determining the identifications of the attitude, social influence, and behavior intention (Tyler & Todd,1995).

The second stream of the research examined the use of technology from diffusion of innovation viewpoint (Rogers 1983). This research examines many different elements that are considered identifications of the usage of information technology such as adopters characteristics and innovation characteristics (Tyler & Todd,1995).

After that, some researchers combined the intentions literatures with innovations literatures to examine the identifications of the potential user of the technology (Tyler & Todd,1995). For instance, DTPB resulted from the combination of the two lines of literatures that include innovations and intentions. According to Taylor and Todd (1995), DTPB provides more understanding of individual behavioral intention and actual use of information technology than TAM and TPB model. similarly, Blake and Kyper (2013) found that TPB and DTPB were useful in explaining a significant variance in ones' intentions to share online files. However, DTPB had more predictive power than TPB in understanding users' intention to share online media files. Also, Blake and Kyper emphasized the finding of Tayler and Todd (1995) that DTPB can be easily used for managerial purposes of information system deployment. Since the determinants of behavioral intention in DTPB model are decomposed to specific belief structures, information technology administrators in an institution can readily target beliefs. Decomposition intention determinants provides better understanding of complex factors that affect behavioral intention (Tyler & Todd,1995). Since policy makers in the Imam Abdulrahman Bin Faisal University, one of the target audiences for my study, using this model will provide important recommendations for them about how they could increase the adoption of social media for learning.

DTPB was widely employed to explore influential factors that affect peoples' intention and usage of social media. Several studies demonstrated that DTPB model is valid and it is 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).

For all mentioned reasons, this study will employ the DTPB as a theoretical framework to identify factors that impact the intentions of faculty to embrace social media websites in their pedagogical practices. The next section, will define the components of this model in detail and it will present how this model has evolved, as well as explaining the extent to which DTPB are reliable and valid.

Theory of Reasoned Action. TRA, which predicts human behavior, was designed by Fishbein and Ajzen (1975). In the last few decades, TRA has been considered one of the most influential theories in understanding and explaining individuals' behavior (Taylor & Todd, 1995; Trafimow, Sheeran, Conner, & Finlay, 2002). TRA assumes that as human beings, we usually act rationally; before performing any behavior, we take into consideration the available information related to the behavior and think about implications of this behavior, whether implicitly or explicitly (Ajzen & Fishbein, 1980). So, TRA does not advocate that human social behaviors are automatic behaviors, or that they are controlled unconsciously (Ajzen & Fishbein, 1980).

According to TRA, intention is the only main predictor of a person's behavior, and the intention is a function of personal and social factors (Ajzen & Fishbein, 1980). The personal factor is called *attitude*, which is defined as ones' positive or negative evaluation regarding performing a behavior (Ajzen & Fishbein, 1980). The social factor is called *subjective norm*, which is defined as persons' perception of the significant other's opinions regarding executing or not executing a certain behavior (Ajzen & Fishbein, 1980). Generally speaking, individuals show more inclination to perform a behavior when they anticipate positive consequences for performing the behavior and when they believe that significant others (i.e. spouse, boss, family) expect them to behave in that manner. Both attitudes toward behavior and subjective norms concerning behavior are impacted by their predecessors which are behavioral and normative beliefs (Ajzen & Fishbein, 1980). These behavioral beliefs refer to the various possible consequences of performing a particular behavior and the evaluation of these consequences. Normative beliefs represent what specific significant referents think about whether an individual should do a certain behavior and the extent to which this individual is motived to conform with these significant referents (Ajzen & Fishbein, 1980). In addition, TRA was designed to predict human behavior performance concerning volitional behavior; that is, behavior that person has full control over (Ajzan & Fishbein, 1980).
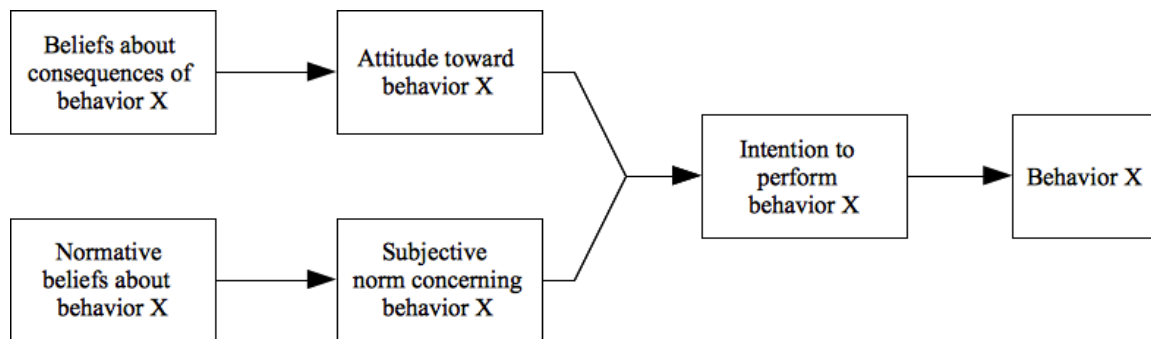
Figure 2. Theory of Reasoned Action (TRA)

Theory of Planned Behavior. TRA only predicts voluntary behavior which is considered a limitation in this theory (Trafimow et al., 2002). In some situations, a person may strongly intend to perform a behavior; however, he or she does not perform it because of external constraints such as lack of facilities or internal factors such as lack of ability (Trafimow et al., 2002). In order to address situations such as having insufficient control over behavior, Ajzen (1985) extended the TRA theory to include a further construct, which is *perceived behavioral control*, which he defined as the extent to which an individual believes that he or she has control over a behavior.

There are many studies that demonstrate that when perceived behavioral control is added to TRA as an additional predictor, the predictive power of the behavior in question is increased (Ajjan, & Hartshorne, 2008; Ajzen, 1991; Al-Otaibi & Houghton , 2016; Sadaf et al., 2012).

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, and behavioral control (Ajzen, 1991).

An individual's attitude is one of behavioral intention determinants, and it is related to "a latent disposition or tendency to respond with some degree of favorableness or unfavorableness to psychological object" (Fishbien & Ajzen, 2011, p. 76). The second predictor of the behavioral intention in TPB is a subjective norm, which is "[a] person's perception that most people who are important to him think he should or should not perform behavior in question" (Fishbein & Ajzen , 1975, p. 302). The third determinant is termed perceived behavior control, which is related to the ability of performing the behavior under consideration (Ajzen, 1985, 1991, 2005).

Generally speaking, based on the TPB, an individual tends to perform a behavior when he or she has a positive evaluation of outcomes of performing this behavior, when there is pressure from significant others, and when he or she believes that he or she is capable of performing the behavior and has the facilities needed (Ajzen, 2005).

Since the purpose of TPB is not only predicting a behavior but also explaining it, it attempts to clarify the reasons beyond the mere performance of this behavior, including why an individual holds a particular attitude, subjective norm, and perceived behavior control (Ajzen, 2005).

In fact, each construct is predicted by underlying beliefs. To begin with, attitude is a function of attitudinal beliefs and the evaluation of the outcomes (Mathieson, 1991). Behavioral beliefs reflect the subjective probability that performing a behavior will result in a specific consequence (Mathieson, 1991). Therefore, the combination of the subjective probability of outcomes and the subjective value of the anticipated outcomes determine the attitude toward a specific behavior (Ajzen, 2002). For example, if a

professor thinks that using social media websites would improve student learning, and if improving student learning is very important for him or her, it is very likely that the professor will hold a positive attitude to embrace social media in his or her teaching.

Second, a subjective norm is a production of normative beliefs and motivation to conform with significant referents (Mathieson, 1991). According to Mathieson (1991), Referents refers to people whose opinions may influence the individual. Normative beliefs are defined as an individual perception of the significant referent individuals' expectations regarding performing a behavior (Ajzen, 2002). Therefore, the combination of normative beliefs with the individual's motivation to conform with the opinion of the referents determine the subjective norm. For example, if a professor believes that his or her colleagues believe that an individual should use social media for teaching, and he or she also believes that conforming with the opinion of those colleagues is relatively significant, this will likely impact the intention of the professor to use social media.

Third, in TPB, perceived behavior control is considered a production of one's control beliefs and perceived facilitation (Mathieson, 1991). Control beliefs is defined as the perceived existence of resources, skills, and opportunities that facilitate the performance of a behavior (Ajzen, 1985; Mathieson, 1991). Perceived facilitation reflects a person's evaluation of the significance of the availability of the resources or skills required to involve in the behavior (Mathieson, 1991). For instance, if a professor wants to use social media for teaching and social media requires Internet access but Internet access is not available, the professor's control belief about Internet availability would be low. However, he or she might assess the perceived facilitation of Internet availability as

high. That is, Internet accessibility is significant; however, it is not available. As result, the professor may not use social media although he or she may believe that using it may improve student learning.

TPB assumes that the significance of attitude, subjective norm, and perceived facilitation may differ from one occasion to another, based on the intention under consideration (Ajzen, 1985, 1991, 2005). The weight of each one of these determinants may be different from one individual to another or from one population to another. For some intentions, the element of attitude is more significant than the subjective norm, or vice versa (2005). For other intentions, the perceived behavioral control determinant could not be essential for predicting some behaviors. It is worth mentioning that it is not always necessary to consider all three factors to explain the individual intention (Ajzen, 2005). Some intentions can be explained by one determinant; others can be explained by two or three determinants.

Figure 3 shows the TPB framework. There are two features that distinguish this model from the TRA model as shown in Figure 2. The first characteristic is that perceived behavioral control has a direct influence on behavioral intentions without any intervention of attitude or subjective norm (Ajzen, 2005). Thus, if a one believes that the needed resources or opportunities to engage in a behavior are not available, it is more likely that he or she will not have a strong intention to perform the behavior, even if the individual has a positive attitude regarding the behavior and expects that significant referents would approve his or her performance (Ajzen, 2005).

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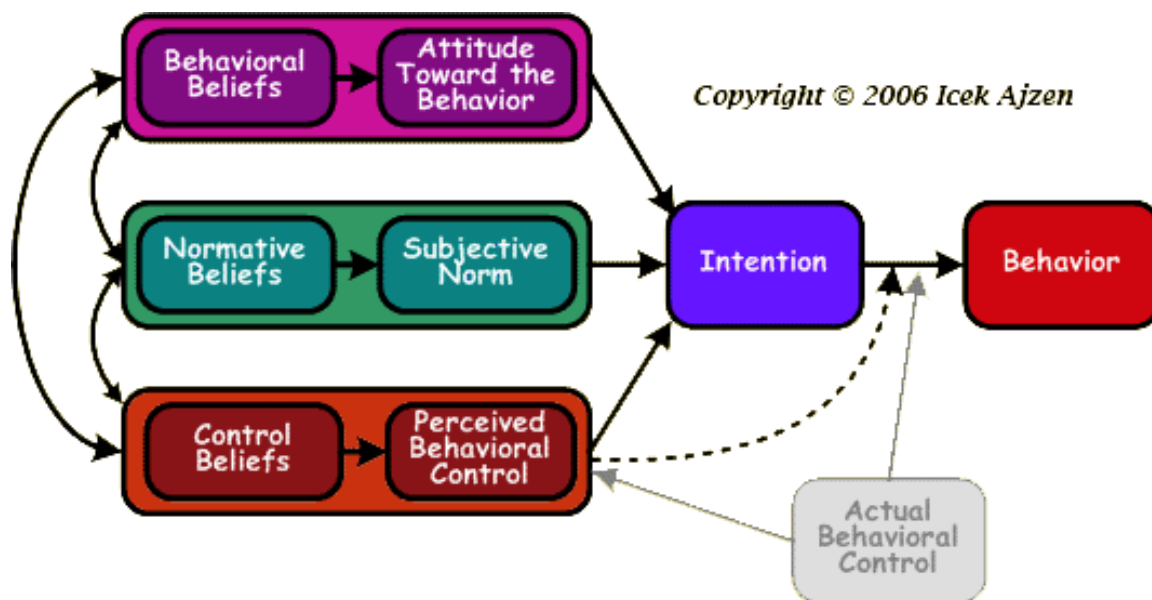
Figure 3. Theory of Planned Behavior (TPB)

The second characteristic of this framework is that perceived behavioral control may have a direct influence on behavior (Ajzen, 2005). Therefore, perceived behavioral control may influence a behavior, whether directly, not mediated by intention, or indirectly, via intention. For example, perceived behavior control will have a direct impact on a behavior only when it reflects the actual behavioral control with some accuracy.

In some situations, the perceived behavioral control regarding performing a behavior is not realistic because of having only a small amount of information about the behavior or being faced with unfamiliar resources and situations. If one of these conditions happens, perceived behavioral control would add only a little to the accuracy of predicting the behavior.

To sum up, when there is reasonable correspondence between individuals' perceptions of the behavior control they believe they have and actual behavior control, the broken arrow between perceived behavior control and behavior would be enacted (Ajzen, 2005).

Decomposed Theory of Planned Behavior. Both TRA and TPB have underlying belief structures that are integrated into a unidimensional construct (Taylor & Todd, 1995a) as shown in figure 4. For illustration, the attitude construct in TPB and TRA is a combination of behavioral beliefs and the 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, 1995). 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 beliefs construct would obscure the amount of the influence of each factor on attitude (Taylor & Todd, 1995).

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 structures as a single structure may lead to invalid result (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 easy to understand (Taylor &Todd, 1995a), as well as producing more specific details and more 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 (Taylor &Todd, 1995a; Hartshorne et al., 2010; Osorio &Papagiannidis, 2014), and therefore increasing the explanatory power of the investigated behaviors (Osorio & Papagiannidis, 2014; Taylor & Todd, 1995). 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).

DTPB is an extension of TPB (Ajzen, 1991). However, it posits that a person behavior is a function of behavioral intention. Attitude, subjective norm, and perceived behavioral control are the main predictors of the individual intention (Tyler & Todd, 1995). Also, each one of these factors are decomposed to lower level constructs (Tyler & Todd,1995). In the next section, each construct of DTPB will be defined.

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 Ajzan (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, 1995). As I mentioned above, attitude toward usage is one determinant of an individual behavior. For the purpose of this study, attitude refers to what extent faculty desire to integrate social media platforms in 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, 1995).

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, 1983). To begin with, relative advantage is defined as the extent to which an individual perceives that an innovation is better than the one that will be replaced by. This can be measured by economic benefits, satisfaction, and convenience (Rogers, 1983). 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 Imam Abdulrahman Bin Faisal University believe that integrating social media technologies in 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 more tendency to use an innovation that they think it will be easy to use and understand (Rogers, 2003), so it is expected that complexity will adversely affect an individual 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 my study, the researcher defined the perceived ease of use of social media websites as the extent to which faculty members in the Imam Abdulrahman Bin Faisal University 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 determinate 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 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, 1995). In my 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 (1995), 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, 1995). 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, 1995). 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 further integration of these tools in 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 superiors believe the use of social media plays a vital role in enhancing students' learning; therefore, these superiors 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 (1995) decomposed this construct to two components. The two components that influence an individual's perceived control are 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). Self-efficacy has been shown to a positively influence one's behavior (Taylor & Todd, 1995). The more self-efficacy potential an adopter has toward an innovation, the more likely he or she will accept and use it. Facilitating conditions refer to the availability of the required resources that are needed to implement an innovation (Tyler & Todd,1995). The availability of resources needed may affect our intention, which will, in turn, affect our behavior. Previous findings have shown that facilitating condition has positive and significant relationships with behavioral intentions and actual usage (Harsono & Suryana, 2014; Tyler & Todd, 1995). However, a lack of facilitating conditions may negatively influence behavioral intentions and usage behavior (Taylor & Todd, 1995).

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.
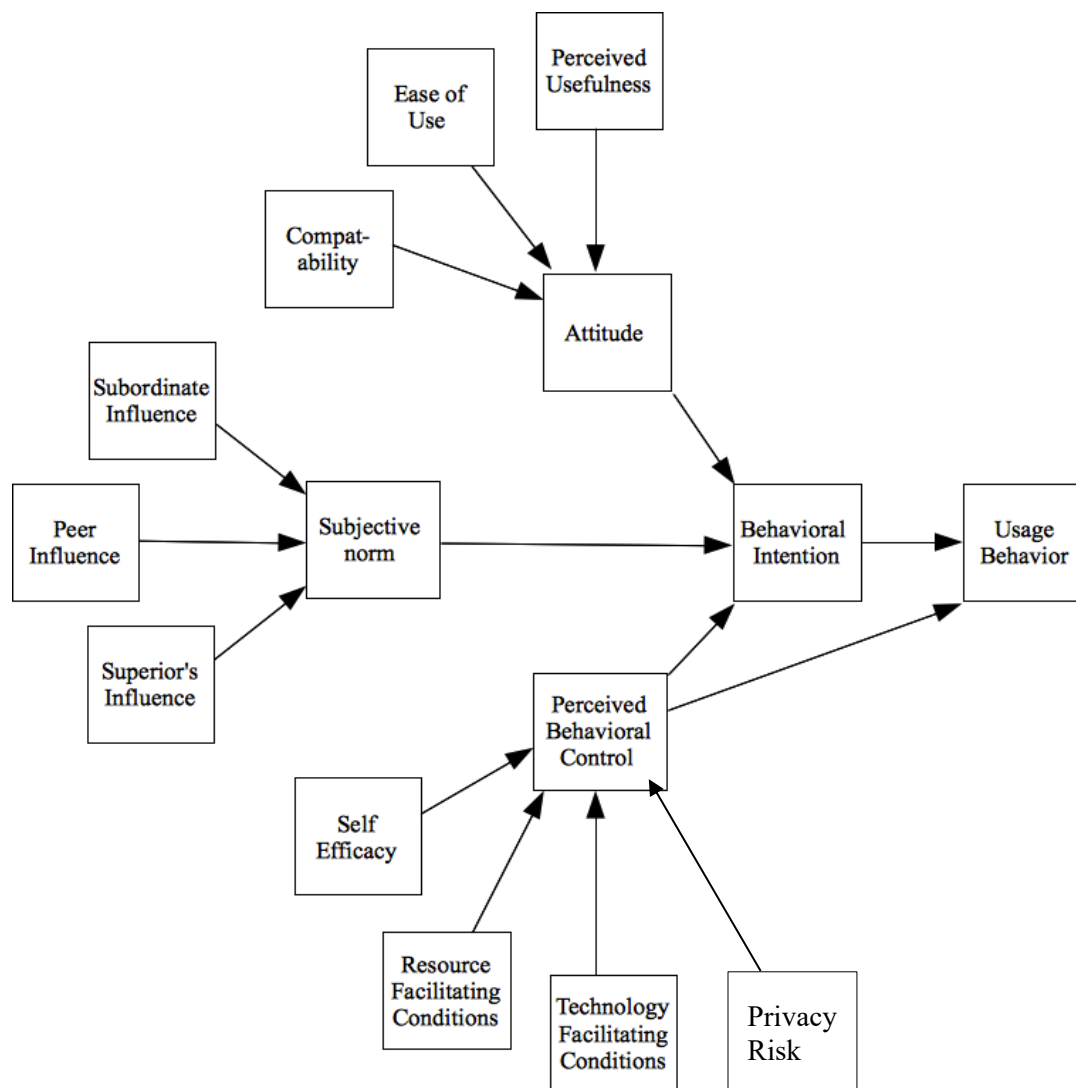
Figure 4. Decomposed Theory of Planned Behavior (DTPB)

Validity and Reliability of DTPB

The framework I intend to use in my study is the DTPB. It is a widely-adopted model across many settings, and its reliability is supported by several research from many different fields. Several studies validated and used this model potential factors that could encourage or inhabit the use of social media in higher education (Ajjan & Hartshorne

2008; Al-Otaibi & Houghton 2016; Almeshal, 2013; Dougherty, 2015; Osorio & Papagiannidis; 2014; Sadaf, 2013).

Research used DTPB in context of social media. This section will present several studies that used the DTPB framework to adopt social media in learning. One of these studies, which evaluated three models, including the DTPB model, was mainly concerned about selecting the best model to predict the adoption of technology. Other studies, besides using the framework of interest, also chose Saudis as the study population.

Taylor and Todd (1995) conducted a study to compare the contributions of several models in predicting human intention and behavior regarding technology use. These three models include the DTPB, TPB, and TAM. A total of 786 students who were expected to use a computer center at a university completed a questionnaire. By using LISREL8, the researchers ensured the validity of the scale by conducting confirmatory factor analysis (CFA). The model showed acceptable fit of the questionnaire constructs. Also, each item in the questionnaire was significantly loaded on its proposed construct. For the reliability, the values of Cronbach's alpha for constructs scales was reliable. The result revealed that all three investigated models were relatively equivalent regarding explanations of students' behaviors in using the computer center. However, after decomposing the constructs of the TPB, the explanation of the intentions showed a slight increase. Findings stated that using DTPB model, researcher will have better understanding of people's intentions toward performing a behavior than TAM and TPB, because it focused more on the factors that were more likely to influence using information technology.

Al-Ghaith (2016) conducted a study to explore factors that could contribute to predict and understand Saudi people's adoption of social networks sites by using the DTPB model. While a questionnaire was distributed to 1100 participants around Saudi Arabia, only 657 responds were valid for the purpose of analysis. In terms of survey reliability, the survey showed high values of internal consistency. Cronbach's Alpha was .974 for the overall scale. The alpha values for each construct in the survey was between .889 for intention and .941 for perceived behavior control. As for the questionnaire validity, the researcher assured the validity using principle component factor analysis. The findings demonstrated that the adoption of social network websites can be predicted by the adopter's intentions, which can be predicted by the adopter's attitude and subjective norm factors. However, the perceived behavior control factor neither influences the intention nor the behavior. It is worth mentioning that the author used a significance level 0.01 instead of using 0.05, which may increase the possibility of failing to reject the null hypotheses. This study could be beneficial for the owners of social networking websites, since improving Saudi people's attitudes toward using their products will positively increase the people's behavioral intention and thus increase their adoption of these products.

Sadaf et al. (2012) conducted a study using the DTPB to noted factors that influence the behavioral intentions of pre-service instructors to embrace Web 2.0 platforms in their teaching. In addition, they aimed to discover the pre-service teachers' perceptions about employing social media tools for an instructional purpose. Researchers interviewed eight instructors and distributed a questionnaire to 286 pre-service teachers at

a Midwestern university. In order to assess construct internal consistency, the researchers used Cronbach's alpha and the values were satisfied based on the benchmark suggested by DeVellis (2012). They ranged between .83 and .96. The findings stated that teacher attitude and perceived usefulness were the most two significant predictors for pre-service teachers' intention to use Web 2.0 tools. When teachers hold positive attitudes to embrace Web 2.0 applications in their teaching and teachers perceive the usefulness of these tools in promoting student learning, they are most likely to adopt social media. Also, the findings indicate that pre-service teachers believe that integrating Web 2.0 in pedagogical context is very useful for students, and that blogs, wikis, and social networking websites were the most useful tools for educational purposes. After determining the major predictors that positively or negatively impact the behavioral intentions of pre-service teachers to employ Web 2.0 in academic settings, teacher educators will be able to increase pre-service teachers' intentions to adopt Web 2.0 by improving attitudes toward it and enhancing perceptions of its usefulness.

Ajjan and Hartshorne (2008) conducted a study to assess whether faculty are aware of the benefit of using Web 2.0 platforms as supplemental tools for enhancing in-class learning. Utilizing the DTPB model, the study sought to determine the most influential predictors that affect faculty members' intentions to accept Web 2.0. This study included 136 faculty members who completed a valid and reliable survey at one university in the Southeastern United States. The questionnaire shoed acceptable internal consistency. Cronbach's alpha ranged from .67 to .98. The result showed that few faculty members used Web 2.0 tools to supplement 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. Moreover, the researcher stated that DTPB is useful model in predicting faculty members adoption of Web2.0 for learning.

Al-Otaibi and Houghton (2016) conducted a study to examine whether colleges students are aware of the academic benefits of embracing Web 2.0 tools for learning. In addition, they investigated factors that affect students' behaviors to adopt Web 2.0 tools using two models, including the TPB and the DTPB. Sixty students from different universities in Australia participated in filling out the survey. The reliability of the instrument's constructs was tested using Cronbach's alpha, with the results ranging from 0.72 to 0.97 for all factors. For instance, the Cronbach's alpha for attitude, subjective norm, and perceived behavior control were .92, .93, and .85 respectively. The result showed that most of the respondents were aware of the potential benefit of using Web 2.0 for enhancing their learning. Also, the respondents' attitude toward Web 2.0, subjective norms, and perceived behavior control were considered strong determinants to predict student adoption of Web 2.0. The results of this study encourage institutions and universities to more fully implement Web 2.0 tools to meet students' needs. This study can be used to demonstrate the demands placed upon faculty members by the institution in regards to knowing how to integrate social media websites with learning.

Paver, Walker, and Hung (2014) conducted another study of 130 faculty members at Midwestern community colleges in the United States in order to explain and

understand adjunct faculty members' intentions concerning integrating technology in teaching using the DTPB. The results revealed that there is a significant and positive relationship between behavioral intention and the integration of technology. However, there was no statistically significant relationship between perceived behavioral control and usage behavior. Attitude, subjective norm, and perceived behavioral control factors accounted for 54.30% of the variance in faculty members' behavioral intentions, and most of the variance in behavioral intention was explained by attitude factors. Therefore, administrators of community colleges may conduct workshops or professional development based on the most important factors in the DTPB model to enhance the integration of technology in instruction.

Using the DTPB model, Osorio and Papagiannidis (2014) surveyed 282 people (college students, workers, and unemployed individuals) in the United Kingdom to understand the determining factors behind joining new social media platforms. In terms of the reliability, the Cronbach's alpha values for each construct in the questionnaire ranged from .83 to .96. As for the validity of the data of the questionnaire, the researchers used CFA and the indices were acceptable. Using structural equation model, the researchers concluded that attitude, subjective norms, and perceived behavioral control were significant determinants for predicting participants' intentions of joining a new social media application. The model accounted for 55% of the variance in intention, with attitude as the most influential factor with ($\beta = 1$). The second influential factor was perceived behavior control with ($\beta = -0.15$), but it did not appear that perceived behavior control negatively impacted the intention; instead, the researchers attributed it to the

participants' familiarity with other social media tools. Subjective norm was the least impacted factor with ($\beta = 0.13$). Lastly, the result also supported the use of the decomposed theory model to increase the explanation of the intention to use a new social media technology compared to the TPB model.

Using the modified version of the DTPB, Almeshal (2013) examined factors that affect faculty members' acceptance and adoption of social media for learning, 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 reliability of data from the survey, 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 researcher 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 affect people's opinion toward adoption of new information systems.

As explained above, several research studies have shown that DTPB is considered a useful model to identify potential factors that could encourage or inhibit the use of social media in higher education. It is a reliable valid model. Its validity has been demonstrated across many fields and populations. However, for the purpose of this study, this model will be adapted to cover the cultural differences. Using social media involves some risks related to users' privacy, and people in Saudi Arabia are highly concerned about their privacy. Therefore, privacy might greatly impact people's intentions in regards to adopting any new technology. Taking this into account, the researcher will add privacy risk as a factor for perceived behavior control.

Summary

This chapter can be divided in three main sections. In the first section, the researcher presents the use of social media in higher education. The potential benefits of adopting social media in teaching practices are provided, as well as some risks associated with the use of social media for learning. Light is also shed on the role of culture in impacting the adoption of social media. In the last part of this section, the researcher presents some theories that are related to how learning happens by using social media.

In the second section, the researcher reviews empirical studies about the factors that could be enablers or hindrances to faculty members' intentions regarding embracing social media in academic settings in Arab and non-Arab countries. After identifying the factors, the researcher categorizes the possible factors in different groups.

In the last section, the researcher presents the historical development of the DTPB framework and also thoroughly defines the construct components of the model.

Furthermore, this section includes several empirical studies in social media that employed

this framework to define the most significant factors in foreseeing intention. At the end of

this section, the researcher discusses the importance of adding privacy risk of the model

as one of the determinants of the perceived behavior control.

Chapter 3: Methodology

Introduction

This section explains how the researcher answered the research questions. It also presents the research design that was employed, as well as the operational definition of the study's variables. This section also describes the population, and the research instruments in terms of validity and reliability of the data obtained from the instruments. The techniques for collecting the data and the statistical approaches that were used to analyze the data are also discussed. Moreover, the researcher shows how ethical considerations were addressed.

Research Design

The main purpose of this study is to explain the acceptance of the use of social media tools in educational practices among faculty members at the Imam Abdulrahman Bin Faisal University, Saudi Arabia, during the 2017-2018 academic year. The classification that fits best with the design of this research is a quantitative, descriptive, and exploratory study. This study is considered to be quantitative because it will depend on the numerical data collected by a questionnaire (Johnson & Christensen, 2014). According to Johnson and Christensen (2014), one characteristic of quantitative design is the investigation of the relationships among different variables. This study investigated the relationship between multiple independent variables (i.e., attitude, subjective norm, perceived behavioral control) and one dependent variable (intention). Since this study seeks to identify and understand the factors that encourage or hinder college faculty

members' intentions to embrace social media tools in their practices at the Imam

Abdulrahman Bin Faisal, this study is classified as an exploratory study.

Research Questions

This study will be directed by the following questions:

1. What perceived benefits and risks of employing social media for teaching do
   faculty members at Imam Abdulrahman Bin Faisal University identify?

2. To what extent do attitude, subjective norms, and perceived behavioral control
   predict faculty members' intentions to adopt social media at Imam Abdulrahman
   Bin Faisal University?

3. Do certain demographic variables (gender, nationality, age, academic rank, and
   colleges) result in statistical differences in faculty members' intentions at Imam
   Abdulrahman Bin Faisal University to adopt social media technologies in their
   teaching?

The Null Hypotheses and Regression Model Equations

According to Creswell (2015), a hypothesis is an expected finding of a study

predicted by the researcher. This prediction is not arbitrary, however; it is based on the

past studies reviewed in the literature (Creswell, 2015). It represents the expected

relationship among variables that sometimes may not be known (Creswell, 2015).

Therefore, researchers do not always use hypotheses in their studies.

In addition, there are two types of hypotheses: null and alternative (Creswell,

2015). Researchers use null hypotheses to state that there are no relationships among

variables. On the other hand, researchers may use an alternative hypothesis if they expect there are differences, changes, or relationships among variables.

For this study, a regression analysis was conducted to test whether attitude, subjective norm, and perceived control significantly predict intentions to use social media for instructional purposes. The null hypothesis for multiple regression is that no independent variable is useful in predicting an outcome (Warner, 2012). Therefore, in this study, the null hypothesis is that attitude, subjective norm, and perceived control are not useful in predicting faculty intention. As a result, the null hypothesis can be expressed as: H_0: $\beta_{attitude} = \beta_{subjective\ norm} = \beta_{perceived\ control} = 0$ or $H_0 = R = 0$. The alternative hypothesis is that one or more independent variables will be useful in predicting the intention, and it can be expressed as: H_1: at least one $\beta \neq 0$.

With respect to gender and nationality, the independent t-test was employed to test whether there are differences among faculty members' intentions based on their gender or nationality. The null hypothesis was that there is no difference between male and female faculty members' intentions, which can be represented as: H_0: $\mu_{male} = \mu_{female}$. The alternative hypothesis is that there is a significant difference between the male and female groups, which can be represented as H_1: $\mu_{male} - \mu_{female} \neq 0$. For nationality variables, the null hypothesis was the same as the gender hypothesis; H_0: $\mu_{Saudi} = \mu_{non\text{-}Saudis}$ and H_1: $\mu_{Saudi} - \mu_{non\text{-}Saudis} \neq 0$

With regards to faculty member academic ranks and colleges, a one-way ANOVA was used to test whether there are differences among faculty members' intentions that are attributed to their academic rank (Warner, 2012). In this case, the null hypothesis is that

there are no differences in faculty members' intentions related to their academic rank, which can be represented as: H_0: $\mu_{\text{Teaching Assistant}} = \mu_{\text{Lecturer}} = \mu_{\text{Assistant Professor}} = \mu_{\text{Associate Professor}} = \mu_{\text{Professor}}$. The alternative hypothesis is that there is at least one significant difference in academic rank group means. Regarding faculty members' colleges, the null hypothesis is that there are no differences in faculty members' intentions related to colleges they teach at, which can be represented as: H_0: $\mu_{\text{Teaching Assistant}} = \mu_{\text{Health colleges}} = \mu_{\text{Engineering colleges}} = \mu_{\text{Sciences and management colleges}} = \mu_{\text{Art and Education colleges}}$. The alternative hypothesis is that there is at least one significant difference in college groups.

Operational Definitions of Variables

This study includes one dependent variable and several independent variables, as shown in the tables below. The dependent variable is faculty intention, which was measured by calculating the mean of its items for each participant. The independent variables include attitude, subjective norm, and perceived behavior control. To measure these variables operationally, the researcher obtained permission to adapt Hartshorne's et al., (2010) survey. The researcher replaced "Web 2.0" by "social media" to meet the purpose of this study.

Behavioral Intention (INT). This construct was operationally measured by computing the average of the three following items for each participant (Table 1).

Table 1

Questionnaire Items for Measuring Faculty Respondents' Intentions Toward Embracing

Social Media in Teaching

	Items
1	I plan to use social media technologies in my classroom
2	I intend to use social media technologies within the next semester
3	I will add social media technologies to my class next semester

Note: Adopted from Hartshorne's et al. (2010) survey

Attitude (ATT). Operationally, this construct was measured operationally by

computing the average of the three following items for each faculty member (Table 2).

Table 2

Questionnaire Items for Measuring Faculty Respondents' Attitudes Toward Embracing

Social Media in Teaching

	Items
1	Social media will be useful in my teaching
2	The advantage of using social media outweighs the disadvantages of not using it
3	Using social media is a good idea

Note: Adopted from Hartshorne's et al. (2010) survey

Perceived Usefulness (PU). This construct was operationally measured by

computing the average of the five following items for each participant (Table 3).

Table 3

Questionnaire Items for Measuring Faculty Respondents' Perceived Usefulness of Using

Social Media for Teaching

	Items
1	I feel that using social media will help my students learn more about the subject (the subject matter)
2	I feel that using social media will improve students' satisfaction with the course (more specific than subject)
3	I feel that using social media will improve students' grades
4	I feel that using social media will improve students' evaluation
5	To help my students better learn the material, I will incorporate social media technologies in the classroom

Note: Adopted from Hartshorne's et al. (2010) survey

Ease of Use (EU). This construct was operationally measured in this study by calculating the average of the two following items for each participant (Table 4).

Table 4

Questionnaire Items for Measuring Faculty Members' Perceptions Regarding the Ease of using Social Media for Educational Purposes

	Items
1	I feel that using social media will be easy
2	I feel that using social media will be easy to incorporate in my classroom environment

Note: Adopted from Hartshorne's et al. (2010) survey

Compatibility (Comp). This construct was operationally represented by calculating the average of the two following items for each faculty member (Table 5).

Table 5

Questionnaire Items for Measuring Faculty Respondents' Perception About the Compatibility of Social Media with Their Teaching

	Items
1	Using social media are compatible with the way I teach.
2	Using social media technologies aligns with the subject I teach.

Note: Adapted from Hartshorne's et al. (2010) survey

Subjective Norm (SN). Operationally, this construct was represented by calculating the average of the two following items for each faculty member (Table 6).

Table 6

Questionnaire Items for Measuring the Extent to Which Faculty Respondents' Conformed to Social Pressure

	Items
1	People who influence my decision would think that I should use social media in my teaching.
2	People who are important to me would think that I should use social media in my teaching.

Note: Adopted from Taylor and Todd's (1995) survey

Superiors' Influence (SPI). Operationally, this construct was measured operationally by computing the average of the two following items for each faculty member (Table7).

Table 7

Questionnaire Items for Measuring the Extent to Which Faculty Respondents' Conformed to Their Superiors' Expectations

	Items
1	My superiors (such as college department chair or dean of the college) think it is important that I use social media technologies in my classroom.
2	My superiors (such as college department chair or dean of the college) think that I should use social media technologies in the classroom.

Note: Adapted from Almeshal's (2013) survey

Peers' Influence (PI). This construct was measured by calculating the average of the two following items for each faculty member (Table 8).

Table 8

Questionnaire Items for Measuring the Extent to Which Faculty Respondents' Teaching

Was Influenced by Their Peers and Classmates

	Items
1	My colleagues are using social media technologies in their classrooms.
2	My colleagues think I will benefit from using social media technologies in my classroom.
3	My colleagues and friends would think that I should use social media technologies in the classroom.

Note: Adopted from Hartshorne's et al. (2010) survey

Students' Influence (SI). This construct was measured operationally by computing the average of the two following items for each participant (Table 9).

Table 9

Questionnaire Items for Measuring the Extent to Which Faculty Respondents' Teaching

Was Influenced by Their Students

	Items
1	My students think that it is important to use social media technologies in the classroom.
2	My students think that I should use social media technologies in the classroom.

Note: Adopted from Hartshorne's et al. (2010) survey

Perceived Behavior Control (PBC). This construct was measured operationally by computing the average of the three following items for each faculty member (Table 10).

Table 10

Questionnaire Items for Measuring Faculty Respondents' Perceptions of Having Skills and Resources Required to Adopt Social Media in Instruction

	Items
1	Using the social media technologies is entirely within my control
2	I have the knowledge and ability to use social media
3	I know enough to use social media technologies

Note: Adopted from Hartshorne's et al. (2010) survey

Self-efficacy (SE). This construct was represented operationally by computing the average of the two following items for each faculty member (Table 11).

Table 11

Questionnaire Items for Measuring Faculty Respondents' Self-Efficacy for Adopting Social Media in Their Instructions

	Items
1	I would feel comfortable using social media technologies
2	I could easily use social media technologies on my own

Note: Adopted from Hartshorne's et al. (2010) survey

Facilitating Conditions - Resource (FCR). It was represented operationally by computing the average of the two following items for each faculty member (Table 12).

Table 12

Questionnaire Items for Measuring Faculty Respondents' Perceptions of Having Resources Needed to Adopt Social Media in Instruction

	Items
1	I will have sufficient time to integrate social media into my teaching practice.
2	The existence of social media policy use would encourage me to integrate it into my teaching practice.

Note: Developed by the researcher

Facilitating Conditions – Technology (FCT). It was represented operationally by computing the average of the two following items for each faculty member (Table 13).

Table 13

Questionnaire Items for Measuring Faculty Respondents' Perceptions of Having Technologies Needed to Adopt Social Media in Instruction

	Items
1	I have convenient internet connection to integrate social media into my teaching practice.
2	My university provide the technical support I might need to incorporate social media into my teaching practice.
3	My University provides adequate training to enable me to integrate social media into my teaching practice.

Note: Developed by the researcher

Privacy risk (PR). This construct was operationally measured by computing the average of the three following items for each participant (Table 14).

Table 14

Questionnaire Items for Measuring the Level of Faculty Respondents' Concerns About Their Privacy When Adopting Social Media in their Instructions

	Items
1	I am concerned that the information I submit on the internet could be misused
2	I am concerned that a person can find private information about me on the Internet
3	I am concerned about submitting information on the Internet because it could be used in a way I did not foresee.

Note: Adopted from Dinev and Hart's (2003) survey

Instrumentation

The main purpose of a measurement is to obtain numeric information about the intended characteristics that require investigation. Some demographics, such as height or age, can be measured precisely and directly by using single measures, while other, more complex characteristics are difficult to test using single measures (Bovaird, 2010). Accordingly, scales include multiple items, with each item representing a single measurement of an intended characteristic (Bovaird, 2010). The number of items required

to represent a characteristic depends on the complexity of that characteristic (Bovaird, 2010).

The ultimate purpose of this research is to identify faculty members' intentions about the instructional use of social media in Saudi Arabia. The questionnaire is considered an appropriate collection tool for people's thoughts, beliefs, perceptions, and behavior intention (Johnson, 2014). According to Sue and Ritter (2007), using an online questionnaire is an appropriate option when there is a large sample size that is geographically dispersed. Using this reasoning, the researcher chose to collect the data using a questionnaire because the Imam Abdulrahman Bin Faisal University has several colleges located in areas, which makes interviewing faculty members costly and difficult. The survey instrument also assists in investigating factors that affect faculty members' decisions to embrace social media in their pedagogical practices.

Using the Qualtrics software, the questionnaire was developed to include four sections: (a) demographic items, (b) the benefits and risks of integrating social media in in teaching as recognized by college faculty members, (c) factors that motivate or hinder college faculty from embracing social media in their teaching practice, and (d) an open ended question.

Demographic questions. This section includes several questions related to participants' age, gender, nationality, teaching experience, academic rank, college, and social media tools that they use.

Benefits and risks of using social media in pedagogy recognized by college faculty. This section consists of three multiple response questions, with respondents

having the ability to choose more than one answer. The first question asks the participant

to select the social media tools they use to enhance their teaching method. The second

question asks the participant to choose what he or she sees as the expected benefits of

employing social media for teaching. This question was adopted from Sadaf's (2013)

study. The third question in this section is related to the perceived risks of using social

media for teaching. Respondents chose the risks that they expected could be involved

with the use of social media. This question was adapted from Lenartz's (2012) study.

  Factors impacting the adoption of social media in pedagogy. This section of

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 (no neutral

option) to reflect their agreement with the statements. Higher numbers indicate a high

level of agreement (4=Agree, 5=Strongly Agree), and lower numbers indicate less

agreement (1=Strongly Disagree, 2=Disagree). The main reason behind the exclusion of a

mid-point on a Likert-type scale is to avoid distortion in the data collected (Garland,

1991). Having 2.9 or 3.5 as a mean for some variables will not make sense and will

distort the results. Also, Ducharme (2014) recommended using a 4-point Likert-like scale

when it is expected that respondents have an opinion about the topic being investigated.

Therefore, in this study, the researcher expects that college faculty members at the Imam

Abdulrahman Bin Faisal University have adequate information to form their opinions

about social media. This question is adapted from Hartshorne, Ajjan, and Ferdig's (2010)

study. Since Hartshorne et al. designed their survey to identify factors that can be

enablers or hindrances to faculty use of Web 2.0 tools, the researcher replaced "Web 2.0" with "social media" to meet the purpose of this study. In regards to ethical considerations, a request to use and adapt the survey was sent to Hartshorne and permission was granted (Appendix A). Also, the researcher added some items regarding privacy risk which were adopted from Dinev and Hart's (2003) study. Also, the researcher added two items related to time and policy to facilitating conditions resources factor. Further, three items were added to the section on technology facilitating condition factors that are related to the availability of Internet connection, training on using social media, and technical support.

Open-ended question. The last section of the survey consisted of one open-ended question. This question asks the respondents who have used social media in their teaching to present the reasons that prompted them to use these tools. Also, it asks those who have not yet used any social media tools in their teaching to provide the reasons that are preventing them from using these tools. The respondents were not required to answer this question. The main purpose of this question is to give the respondents a space to share their experiences, opinions, and suggestions about adopting social media among faculty members at the Imam Abdulrahman Bin Faisal University.

Validity

Researchers need to have measurements for their studies that can identify the magnitude of latent variables. However, sometimes the existing measurements may be unsuitable or unavailable, and adopting inappropriate measurements presents the risk of inaccurate data (Devellis, 2012). For this reason, researchers may design a specific

measurement to measure certain variables. Designing a new measurement requires an investigation of the validity and reliability of the measurement in order to obtain a valid result. The disadvantages of using poor measurements may outweigh any benefits the researcher is likely to gain (Devellis, 2012). Most importantly, the validity of the researcher's conclusion may be invalid, causing the wrong decisions to be made subsequently. When a researcher plans to conduct research, it is vital to ensure that the selected measuring instrument (e.g., a survey) will provide accurate measurements and meaningful information on the intended variables (Johnson & Christensen, 2014). Thus, when researchers select their instrument, they must consider its reliability and validity above all (Johnson & Christensen, 2014).

Validity refers to the precision of interpretations that are made based on a measurement score (Johnson & Christensen, 2014). In order to establish a valid measurement, scores obtained from that measurement have to measure what they purport to measure in order to make an appropriate judgment about a particular variable that the test is designed to measure (Johnson & Christensen, 2014). According to Bovaird (2010), a test may be reliable but may not be valid.

Criterion-related validity, content validity, and construct validity constitute the three main types of measurement validity (Bovaird, 2010). Criterion-related validity aims to "focus on the usefulness of a test in predicting how people taking the test will perform on some criterion of interest" (Johnson & Christensen, 2014, p. 176), and it usually indicates predictive validity (Devellis, 2012). Content validity relates to whether the selected items sufficiently represent an intended content domain (Devellis, 2012).

Construct/measurement validity indicates the extent to which the selected instrument measures what it purports to measure (Devellis, 2012). All of these types are intended to provide evidence of the reliability and validity of measurements in studies.

Looking at unified validity, Messick (1995) defined validity as "an overall evaluative judgment of the degree to which empirical evidence and theoretical rationales support the adequacy and appropriateness of interpretations and actions on the basis of test scores or other modes of assessment" (p. 741). Messick (1995) introduced six different aspects of unified validity: content, substantive, structural, generalizability, external, and consequential aspect.

In order to better understand some of the aspects of unified validity, the researcher reviewed the previous literature regarding the embrace of social media in pedagogical settings. As a result, the researcher has increased knowledge about the variables in this study. Also, the researcher used factor analysis to ensure structural validity. According to Ul Hadia, Abdullah, and Sentosa (2016), factor analysis is considered an effective way to confirm the convergent and discriminant validity in the adopted instrument. The main purpose of performing factor analysis is to ascertain that attitudes toward behavior, subjective norm, and perceived behavior control are distinct constructs.

Generally speaking, there are some threats to measurement validity. First, using poor instruments (for example, instruments that are illegible or have an unsuitable design) has a direct impact on the data obtained because it may lead to the collection of irrelevant information (Trochim, 2006). Second, using an inadequate number of items in the measurement to reduce the burden on participants may influence validity and

reliability. For instance, when a researcher uses too brief a questionnaire, there is a risk that the questionnaire items will not clearly express the intended construct. That will affect measurement reliability and, in turn, its precision and validity (Al-Qataee, 2012). Third, using inadequate items may influence reliability in that the researcher may decide the questionnaire is reliable even if it is not. Lastly, using a scale for the first time with no prior pilot testing of the instrument is also likely to impact measurement validity.

Reliability

In the area of research, reliability refers to the extent that test scores are constant and stable (Johnson & Christensen, 2014); in other words, in order to establish that a test is reliable, the scores obtained from the test have to be similar every time among a particular group of people. According to Bovaird (2010), reliability is a significant prerequisite for validity. A score on a test must be reliable in order to be valid.

There are various methods that can be used to ascertain whether an instrument is reliable, including test-retest, internal consistency, parallel-forms, and inter-observer reliability (Trochim, 2008). In this study, internal consistency was used as a method to assess the questionnaire's reliability. With internal consistency, researchers examine the extent to which the items consistently measure a single latent variable (Johnson & Christensen, 2014). It represents the extent to which the items are homogeneous within a scale (DeVellis, 2012). Internal consistency is very commonly used in research fields because the researcher needs to apply an instrument to a group of people only one time (Johnson & Christensen, 2014). One way to assess internal consistency is using Cronbach's alpha. DeVellis (2012) classified Cronbach's alpha value to the following:

"Below .60, unacceptable; between .60 and .65, undesirable; between .65 and .70, minimally acceptable; between .70 and .80, respectable; between .80 and .90, very good; and much above .90, one should consider shortening the scale" (p.109).

Pilot Study

In the field of research, implementing a pilot test is considered a cardinal rule (Johnson & Christensen, 2014). The researcher must try out his/her instrument before using it in a research study to ensure that this instrument works properly (Johnson & Christensen, 2014). Johnson and Christensen (2014) suggested that a researcher should conduct a pilot study on at least five to ten people.

The researcher conducted a pilot test for the instrument to ensure that all items are clear and easily understood and help increase the content validity of the questionnaire. To achieve these goals, the questionnaire was first 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, the researcher modified the questionnaire. For example, two items in the superior influences scale that were adopted from Hartshorne's et al. (2010) survey were reworded to promote consistency in the descriptions of the target of the items. The original items stated, "My superior, who influences my behavior would think that I should use social media technologies in the classroom" and "My superior whom I report to would think that I should use social media technologies in the classroom"; however, these were changed to state "My superiors (such as college

department chair or dean of the college) think it is important that I use social media technologies in my classroom" and "My superiors (such as college department chair or dean of the college) think that I should use social media technologies in the classroom". These latter items were adopted from Almeshal's (2013) study and after feedback from the Informational Technology experts.

After that, this survey was given to a small group of faculty members who teach in Saudi universities, asking them to fill out the questionnaire 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. This modified and final questionnaire was used to collect the data from faculty members at the Imam Abdulrahman Bin Faisal University. The initial and final drafts of the questionnaire can be found in appendices D and F, respectively.

The Population

According to Creswell (2015), a population is a group of people who have similar characteristics. Researchers have to define the target population from whom they will obtain information to answer the research questions. The population of this study are all male and female faculty members, either Saudi or non-Saudi, at the Imam Abdulrahman Bin Faisal University, including professors, associate professors, assistant professors, lecturers, and teaching assistants, but does not include administrative staff. The faculty members are from different colleges, including the following:

- Health Colleges

  - College of Medicine

  - College of Dentistry

  - College of Nursing

  - College of Applied Medical Sciences

  - College of Clinical Pharmacy

  - College of Public Health

  - College of Applied Medical Sciences – Jubail

- Engineering Colleges

  - College of Architecture and Planning

  - College of Design

  - College of Engineering

- Sciences and Management Colleges

  - College of Applied Studies and Community Service

  - College of Business Administration

  - College of Computer Science and Information Technology

  - College of Science

  - Community College

- Arts and Education Colleges

  - College of Arts College of Education – Dammam

  - College of Education – Jubail

  - College of Sharia and Law

According to the Ministry of Education in Saudi Arabia (2015), the total number of faculty members in the Imam Abdulrahman Bin Faisal University is 2,412 (1,035 males and 1,377 females). There are 1,576 Saudi faculty members (561 males and 1015 females), and 836 non-Saudi faculty members (474 males and 362 females). This study incorporated the entire population thus it will be a census. Table 15 shows the number of faculty members at the Imam Abdulrahman Bin Faisal University in 2015-16

Table 15

The Number of Faculty Members at the Imam Abdulrahman Bin Faisal University in 2015-16

Positions	Professor		Associate Professor		Assistant Professor		Lecturer		Teaching Assistant		Total
Gender	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Saudi	34	14	36	38	141	232	98	299	252	432	1576
Non-Saudi	40	16	138	96	231	190	65	60	0	0	836
Total	74	30	174	134	372	422	163	359	252	432	2412

Data Collection Procedures

Prior to conducting this study in the population, the researcher obtained the

Institutional Review Board (IRB) approval from Ohio University and obtained the

Collaborative Institutional Training Initiative that is required for obtaining IRB

permission. After obtaining IRB permission (Appendix B), the researcher sent an email

with a link to the survey for all faculty members at the university. According to Sue and

Ritter (2007), sending an invitation email with a link to the survey gives respondents

anonymity. Another advantage of online surveys is that the researcher can easily send the

invitation and invitation reminders multiple times. In order to email all faculty members,

permission had to be granted by the university. Therefore, the researcher communicated

with the dean of scientific research at the Imam Abdulrahman Bin Faisal University to

request permission to distribute the questionnaire to the faculty members in the

university. After receiving permission from the dean (Appendix C), this permission, a

copy of the questionnaire, and an invitation (Appendix E) to complete the questionnaire

were sent to the vice dean for graduate studies to look into how to best distribute the

questionnaire. After that, the public relations unit in the university sent an email to all

faculty members which described the main purpose of the study, an invitation for

participation, and the link to the online survey. Also, before starting the online

questionnaire, participants were asked to agree to participate via a consent form. The

consent form addressed participants' concerns and explicitly stated that the participants

had the right to quit filling out the questionnaire at any time without penalty.

In order to increase the response rate, after two weeks, the researcher sent a follow-up invitation to everyone in the population. The reminder asked respondents who already filled out the questionnaire to disregard the email in order to avoid the possibility that respondents might complete the survey twice. The researcher created a list that contained names and email addresses for all faculty members at the Imam Abdulrahman Bin Faisal University and then used this list to personalize the email invitation for participating in the study by attaching the name of each participant to the request.

Data Analysis Procedures

The researcher used the Statistical Program for the Social Sciences (SPSS), Version 22, as a statistical software to analyze the collected questionnaire data. In the beginning of the analysis process, in order to test the validity of the DTPB scale, the researcher performed exploratory factor analysis using Principle Axis Factoring for factor extraction, using an oblique method for the data rotation. According to (Hair, Black, Babin, &Anderson, 2010), in order to conduct a factor analysis, there should be at least five subjects for each item in the instrument. Based on the factor analysis loading table, there might be some items excluded from the analysis. Then, the researcher tested the reliability of the data of the items related to the DTPB scale and ensured that all the Cronbach's Alpha values for all items were greater than .65, the benchmark suggested by DeVellis (2012).

After conducting the factor analysis and ensuring the reliability of the data, the researcher used the demographics questions to obtain preliminary descriptive statistics of the study participants. The variables of gender, nationality, academic rank, and colleges

are categorical variables, so mode, frequency, and percentages were used. The variables of age and teaching experience were summarized using means and standard deviations because there are measurement variables.

Factor analysis. Factor analysis is a statistical procedure used to analyze the interrelationships among several variables in order to understand the common underlying variables (Hair et al., 2010). By analyzing the correlations among variables, factors analysis determines the variables that are grouped together to constitute what is called a factor (Hair et al., 2010). The number of factors is supposed to represent data dimensionality (Hair et al., 2010). Having one factor means the items measure one construct (unidimensional); however, when there is more than one factor, that means the items measure multiple latent variables (multidimensional) (Johnson & Christensen, 2014).

There are two different kinds of factors analysis, including confirmatory factor analysis (CFE) and exploratory factor analysis (EFA). EFA is usually employed for exploratory purposes and assesses the relationships between the variables and the factors (Suhr, 2006). Therefore, it can be used to identify the underlying factors (factor structure) among variables (Suhr, 2006). CFA is used for confirmatory purposes (Costello & Osborne, 2005), such as confirming the pattern of factor structure of data (Suhr, 2006).

Therefore, EFA is more appropriate to use in developing an instrument, while CFA can be employed to test the extent to which the instrument will have the same structure when it is applied to other samples (Costello & Osborne, 2005). When a

researcher would like to use EFA, there should not be any priori constraints on the number of factors that are extracted (Hair et al., 2010). However, when researchers have prior knowledge, based on theory or research, about how the data will be structured, they should use CFA because they will evaluate the extent to which their data meets the anticipated structure (Hair et al., 2010). On the other hand, Henson and Roberts (2006) stated that it is recognized that research can use EFA in confirmatory ways and that "EFA can indeed be useful even when a priori theory is present" (p. 409).

Since this study adapted another study instrument (Ajjan & Hartshorne, 2008), and this instrument was applied to a different population and setting than its original use and investigate additional constructs such as privacy risk, the researcher used an exploratory factor analysis (EFA) to explore the validity of this adapted instrument in the new population.

In EFA, there are various techniques for extracting a factor. However, maximum likelihood method will give best result when the data is normally distributed, and when the normality is violated, principal axis factoring is the best (Costello & Osborne, 2005). After determining which kind of extraction, an oblique rotation was used. Costello and Osborne (2005) suggest using an oblique method for the data rotation, particularly in the social sciences. They argue that most of the time, factors in the social sciences are correlated.

Sample size in factor analysis. In order to use EFA, a large sample size is needed because the larger the sample, the more accurate the solutions will be (Costello & Osborne, 2005). Having a large sample size is considered very helpful in several

situations, particularly when the communality of the item is smaller than .4, when there are cross loading items, and when there are factors that have fewer than three items (Costello & Osborne, 2005).

Some scholars suggested using the ratio of respondents to the variables as way to determine the minimum required sample size for factor analysis (MacCallum, Widaman, Zhang, & Hong, 1999). Hair et al., (2010), suggested that in order to perform factor analysis, the researcher has to have at least five subjects to each item. Therefore, since the survey used in this study has 39 items, there is a need at least for 195 participants from the census.

Other scholars recommended a specific guideline for the size of the sample in factor analysis. Tabachnick and Fidell (2007) suggest the following crtiteria as guidelines for the number of individuals in the sample in factor analysis, as shown in table 16.

Table 16

Guidelines for Recommended Sample Size to Perform Factor Analysis

Approximate Sample Size	Estimated Reliability
50	Very Poor
100	Poor
200	Fair
300	Good
500	Very Good
1000	Excellent

Note: (Tabachnick & Fidell, 2007, as cited in Mertler & Vannatta, 2010)

Tabachnick and Fidell (2007, as cited in Mertler & Vannatta, 2010) suggested that in order to obtain reliable results by using factor analysis, the sample size should be at least 300. However, this number of the sample might be decreased to 150 when a factor has multiple items with high loadings (>.80).

Steven (2001, as cited in Mertler & Vannatta, 2010) recommended using the number of variables per component to determine the reliability of the component and the needed number of the sample. A component is considered reliable when there are at least four variables with loadings greater than .6 loaded on it. When the components have about 10 variables with low loadings (<40), they are considered reliable, regardless of the number of the sample. However, when components have few low loadings variables, the sample size should be at least 300. In the end, Steven suggests applying Bartlett's sphericity test when the number of the sample is small to test whether the variables in the correlations matrix are uncorrelated.

MacCallum et al., (1999) stressed that the minimum number of the sample size or the minimum ratio of subjects to the items in factor analysis are not stable across several studies, and as result they are not valid. They claim that determining the size of the sample in factor analysis depends highly, but not solely, on in the level of communality. When communalities of all items are greater than .6, that greatly minimize the impact of the sample size on the accuracy of extracted solutions. With a small sample size (N>100), there are conditions that have to be achieved, including high communalities, well-determined factors, and convergent to proper factors. When the level of the communalities of all items are around .5, a good recovery of factors is not difficult to

achieve if the sample size ranges from 100 to 200 and the factors are well defined.

However, there is a need for quite large sample size (well over 100) in order to get a good

recovery of factors when the communalities of all or most items are less than 0.5 and

there is a high over-determination of factors with six to seven items loaded on these

factors. A larger sample (above 300) is needed when the communalities of all or most

items are low and there is a high over-determination of factors with three or four items

loaded on these factors. Finally, under the worst circumstances, when the communalities

of all or most items are low and the factors are weakly determined, it is possible to

achieve a good recovery when there is a very large sample size (over 500). Similarly,

Hogarty, Hines, Kromrey, Ferron, and Mumford (2005) found that the impact of the size

of sample on the quality of factor solutions is reduced when the communalities of the

variables are high. Also, they found that when the communalities of the variables are low,

the influence of the sample size increases.

Rotation in factor analysis. The main purpose of the factor rotation is to produce

a clearer, easier to identify, and more interpretable loading pattern (Costello & Osborne,

2005; Warner, 2012). One way to conduct data rotation is by using orthogonal rotation

techniques. Orthogonal rotation is adopted when it is believed that the factors that will be

extracted are uncorrelated (Costello & Osborne, 2005). Different methods of orthogonal

rotation exist, including quartimax, varimax, and equamax. Quartimax simplifies the

factor complexity by maximizing the loadings of variance on each variable (Mertler &

Vannatta, 2010). It tends to produce general factors, so it will not meet the main purpose

of rotation. Its benefits for simplifying data are not proven. Varimax is the most popular,

widely used rotation method (Abdi, 2003; Costello & Osborne, 2005; Warner, 2012). It maximizes the variance for each factor in order to minimize the complexity of the factor (Mertler & Vannatta, 2010). It clearly separates factors to be more distinctive (Hair et al., 2010). Equamax combines the techniques that are used in both varimax and quartimax (Mertler & Vannatta, 2010).

Another way to conduct data rotation is using oblique rotation. Researchers use oblique rotation when they think that the factors they will be extracting are correlated. Oblimin and promax are two techniques for oblique rotation. According to Mertler and Vannatta (2010), direct oblimin is "an oblique method that simplifies factors by minimizing cross products of the loadings" (p. 253), while promax rotates the factors to oblique positions (Mertler and Vannatta, 2010). It is worth mentioning that the two kinds of oblique rotation generate similar results. Generally speaking, oblique rotation is more suitable in most situations than the orthogonal method (Browne, 2001).

According to Hair et al., (2010), there is no specific rule to lead researchers to the best methods when selecting among rotation models: "No compelling analytical reason suggests favoring one rotational method over another" (Hair et al., 2010, p. 116). Fabrigar, Wegener, MacCallum, and Strahan (1999) stated that some researchers prefer using orthogonal rotation because it produces a simple structure. However, oblique rotation is more accurate than orthogonal for several reasons. First, in psychology, constructs (e.g., behavior attitude) are more likely to be correlated with each other, so using oblique rotation produces a more accurate representation for how the constructs are correlated. Also, applying oblique rotation leads to obtaining estimations of the

correlation among solutions. So, in this study, Principal Axis Factoring with Promax rotation was performed. After establishing reliabilities and validities, the researcher can begin to address the research questions of the study.

Research question one. This question is a descriptive question. In order to answer it, the researcher used descriptive statistical techniques. Using frequencies and percentages, the researcher presented the number of participants who selected each one of the perceived benefits and risks of using social media and what percentage they represented.

Research question two. According to Creswell (2015), researchers use correlational statistic approaches to determine the influence of multiple independent variables on a dependent variable and to predict the outcome. One example of these correlational statistical approaches is multiple regression. Using multiple regression to investigate the relationships between one dependent variable and multiple independent variables is an appropriate statistical approach (Hair et al., 2010). According to Hair et al., (2010), the purpose of multiple regression is to predict the magnitude of changes in the dependent variable (faculty members' intentions) as a result of the changes in the independent variables (attitude, subjective norms, and perceived behavior control). Therefore, multiple regression will be used to determine the significant factors that could be enablers or hindrances to faculty members' intentions regarding embracing social media in academic settings. However, there are several assumptions that need to be satisfied in order to perform regression. Specifically, the assumptions that cannot be include normality, linearity, multicollinearity, and homoscedasticity (Warner, 2012).

Normality can be checked by looking at a histogram, while a scatter plot is very helpful

for checking linearity and homoscedasticity. In order to check the multicollinearity

violation, the researcher should check Variance Inflation Factor (VIF) and the tolerance

value.

Research question three. This question requires performing independent t-tests

and one-way ANOVA. The main purpose of performing the independent t-test is to check

whether there is a difference between the male and female faculty members. Also,

another independent t-test was conducted to test the difference between Saudi and non-

Saudi faculty members' intentions to use social media for instructional purposes.

Since there are more than two groups of faculty members based on their

academic rank, there is a need to conduct a one-way ANOVA. Performing a one-way

ANOVA assisted the researcher to identify whether there is there is at least one

significant difference in the group means. To explore where the significant difference/s

is/are, the Tukey test was conducted. It is worth mentioning that to check the

homogeneity of variance, the researcher used Levene's Test.

In order to qualitatively determine the motives and hindrances toward the

adoption of social media for enhancing an educational process from the participants'

views, the questionnaire included an open-ended question. This question is qualitative in

nature. So, in order to qualitatively analyze this question, the researcher read through

each participant's answer separately and highlighted the most important information to

divide the answers into information segments, which are related to the research question.

Then, the researcher coded these segments using descriptive codes that best describe

these segments. After finishing the coding, the researcher grouped the codes and developed themes to categorize all of these grouped codes into the themes.

Summary

This chapter was a roadmap that guides this research. It provides a crystal clear image about the research design that was used to assist the researcher to answer his research questions. This study is classified as quantitative, descriptive, and exploratory. The research design was selected to identify and explain motivating and inhibitory factors that could impact integrating social media platforms in teaching. This study depended on the DTPB model, which uses college faculty attitude, subjective norm, and perceived control as primary determinants for their intention toward employing social media tools in their teaching. These three factors were used in predicting college faculty members' behavior. Also, the researcher conducted descriptive statistics such as mean and standard deviation to present the features of the collected data. In Chapter 4, the researcher provided detailed information about how the data were collected and analyzed.

Chapter 4: Results

This study aims to identify perceptions of faculty members at Imam Abdulrahman Bin Faisal University regarding the benefits and risks associated with integrating social media in teaching. Also, using DTPB framework, this study explains the amounts of the effect of attitude, subjective norm, and perceived behavioral control on faculty member adoption of social media tools for teaching. Using an online questionnaire, the researcher distributed the survey via email to all faculty members at Imam Abdulrahman Bin Faisal University. The questionnaire was divided into four main sections. The first section contained demographic information about faculty members' gender, age, nationality, academic rank, teaching experience, and college within the university. The second section collected faculty members' perceptions about the benefits and risks of embracing social media for teaching purposes. The third section collected information about faculty member intentions to embrace social media in their teaching practices, and the last section was an optional open-ended question which asked faculty members to explain either why they used social media tools for teaching purposes or what prevented them from doing so. This chapter presents the information obtained from analyzing this data and discusses the validity and reliability of the scores, outliers, descriptive statistics, regression analysis, independent t-tests, and one-way ANOVAs.

Data Collection Procedure

Before collecting the data for the main study, a pilot study was conducted. The pilot study was conducted to obtain feedback such that adjustments could be made to the questionnaire (e.g., obtaining translational feedback, changing verbiage, etc.). The

changes in the questionnaire from the pilot study to the main study can be seen in the Appendix F and G.

After pilot testing, the researcher used the Qualtrics software platform to collect the data. A link to the survey was generated and sent to a point of contact at Imam Abdulrahman Bin Faisal University. This point of contact distributed the email out to all faculty members in the university, requesting them to participate. Furthermore, the researcher obtained all faculty member emails from the directory university website and contacted each faculty member directly with a personalized email to request their participation in the study. Since the university has faculty members who do not speak Arabic, the researcher provided two versions of the survey, one in Arabic and another in English. The total number of usable surveys obtained was 411. Of these 411, 13 participants completed the survey in English. Further, out of the original 411, 361 faculty members provided complete responses to all required sections. The remaining 50 faculty members only partially completed the questionnaire, with completed responses for the first two sections of the survey. The results provided by these 50 participants were used in the demographic analyses and the analyses pertaining to faculty members' perceptions about benefits and risks of using social media to supplement their instructions. Because these 50 participants did not provide complete data, they were not included in the analyses pertaining to factors influencing intention to incorporate social media into teaching and open-ended questions.

Demographic Findings

This section collected information about faculty members' gender, age, nationality, academic rank, teaching experience, and the specific college they were employed in. Of the 411 faculty members who participated in this study, 278 (68.6%) were female and 133 (32.4%) were male, as shown in table 17. Regarding the nationality of the participants, 248 (60.3%) of the participants were Saudi and 163 (39.7%) were not as shown in table 18.

Participant ages ranged between 24 and 65 years with an average of 39.44 years (SD = 9.05) as shown in figure 5. Years of teaching experience ranged from .5 to 40 years with an average of 12.5 (SD = 8.93) as shown in table 19.

With respect to academic rank, there were 45 (10.9%) teaching assistants, 135 (32.8%) lecturers, 157 (38.2%) assistant professors, 48 (11.7%) associate professors, and 26 (6.3%) professors as shown in table 20. One hundred ninety-seven (47.9%) of the faculty members were associated with the Arts and Education colleges, 110 (26.8%) were associated with the Sciences and Management colleges, 34 (8.3%) were associated with the Engineering colleges, and 70 (17.0%) were associated with the Health colleges as shown in table 21.

Approximately 371 (90.3%) of the faculty members reported that they used instant messaging (such as WhatsApp) in their daily lives, 255 (62.0%) used media sharing (e.g., Instagram, Snapchat, YouTube), 240 (58.4%) of the participants used social networking (e.g., Facebook), 181 (44.0%) of the participants used microblogging (e.g.,

Twitter), 110 (26.8%) used video conference (e.g., Skype), 85 (20.7%) used wikis, and

33 (8.0%) used blogs as shown in table 22.

Table 17

Gender Distribution of Faculty Respondents at Imam Abdulrahman Bin Faisal University

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	278	67.6	67.6	67.6
	Male	133	32.4	32.4	100.0
	Total	411	100.0	100.0	

Table 18

Nationality Distribution of Faculty Respondents at Imam Abdulrahman Bin Faisal University

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Saudi	248	60.3	60.3	60.3
	Non-Saudi	163	39.7	39.7	100.0
	Total	411	100.0	100.0	
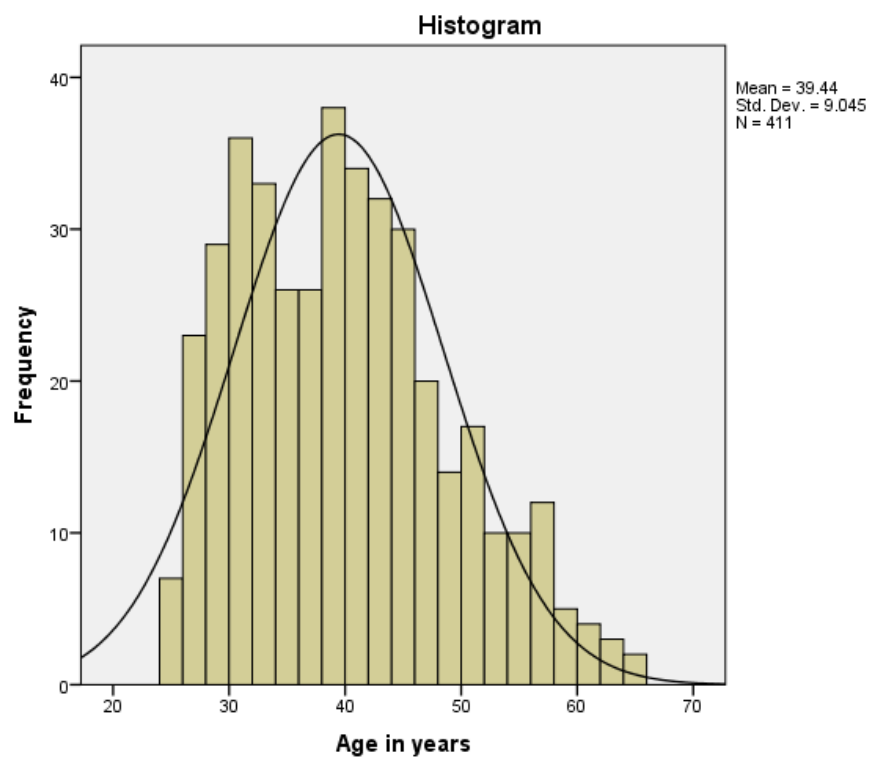
Figure 5. Age Distribution of Faculty Respondents at Imam Abdulrahman Bin Faisal University

Table 19

Teaching Experience in Years as Reported by Faculty Respondents at Imam Abdulrahman Bin Faisal University

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Experience	411	39.5	.5	40.0	12.59	8.93

Table 20

Academic Rank Reported by Faculty Respondents at Imam Abdulrahman Bin Faisal University

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Assistant Professor	157	38.2	38.2	38.2
	Lecturer	135	32.8	32.8	71.0
	Associate Professor	48	11.7	11.7	82.7
	Teaching Assistant	45	10.9	10.9	93.6
	Professor	26	6.3	6.3	100.0
	Total	411	100.0	100.0	

Note: Due to rounding the total might not equal 100

Table 21

Associated Colleges of the Responding Faculty at Imam Abdulrahman Bin Faisal

University

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Arts and Education colleges	197	47.9	47.9	47.9
	Sciences and Management colleges	110	26.8	26.8	74.7
	Health colleges	70	17.0	17.0	91.7
	Engineering colleges	34	8.3	8.3	100.0
	Total	411	100.0	100.0	

Note: Due to rounding the total might not equal 100

Table 22

Faculty Respondents' Usage of Social Media in their Daily Lives at Imam Abdulrahman

Bin Faisal University

Social media used in daily life	N	Percent of Cases
Instant Messaging	371	90.3%
Media sharing	255	62.0%
Social networking	240	58.4%
Microblogging	181	44.0%
Video conference	110	26.8%
Wikis	85	20.7%
Blogs	33	8.0%

Note: Participants were instructed to select all choices that applied

Participants also provided how often they used social media to supplement or improve their teaching. One hundred eighty-one (44.0%) participants reported that they do not use and do not plan to use blogs. One hundred thirty-nine (33.8%) faculty members stated that they currently do not use blogs but planned to use them in the future. Sixty-two (15.1%) of the participants reported that they used blogs occasionally, 14 (3.4 %) said they frequently use blogs, and 15 (3.6 %) reported that they always use blogs for teaching purposes.

With regards to wiki applications (e.g., Wikipedia, Wikispaces), 180 (43.8%) faculty members in the sample indicated that they currently do not use wiki applications and do not have intentions to use them in the future. Also, 94 (22.9%) faculty members reported that while they do not currently use wikis, they intend to use them in their future

teaching. One hundred thirty-seven (33.3%) of the participants replied that they use wiki applications in their teaching. Out of the 137 respondents who use wiki applications, 93(22.6%) use them occasionally, 29 (7.1%) use them frequently, and 15 (3.6%) always use them.

With respect to video conference applications (e.g., Google hangout or Skype), a large number of faculty (195, 47.4%) reported that they do not use it for teaching nor do they have any intention to use it in the future. Seventy-eight (19.0%) of the participants stated that while they currently do not use video conference, they have the intention to use it in the future. One hundred thirty-eight (33.5%) responders reported that they use video conference applications as a tool to enhance their teaching. Among these 138 faculty members, 84 (20.4%) occasionally use video conference applications in teaching, 28 (6.8%) frequently use them, and 26 (6.3%) always use them.

In terms of participants' usage of microblogging applications (e.g., Twitter), 137 (33.3%) responders stated that they do not use microblogging and they do not intend to use it. One hundred four (25.3%) faculty respondents stated that they currently do not use microblogging, but they plan to use it in their future classrooms. One hundred seventy (41.4%) of the respondents reported that they currently use microblogging in teaching their students. Among of those who use microblogging, 87 (21.2%) occasionally use it, 48 (11.7%) frequently use it, and 35 (8.5%) always use it.

Regarding social networking application (e.g., Google+ or Facebook) usage, 129 (31.4%) of the respondents do not use social networks and do not plan to use them in their future classrooms. Seventy-eight (19.0%) of the respondents reported that they do

not currently use social networks but plan to use them in the future. Two hundred four (49.7%) participants reported that they use social networks. Among these faculty who use social network applications, 99 (24.1%) occasionally use them, 59 (14.4%) frequently use them, and 46 (11.2%) always use them.

In regards to the adoption of media sharing applications (e.g., YouTube, Instagram, Snapchat) among the faculty respondents, 96 (23.4%) do not use and do not plan to use media sharing for teaching purposes. Eighty-five (20.7%) currently do not use media sharing applications with their students; however, they reported that they plan to use them to teach their students in future. More than half of the participants (230, 55.9%) currently embrace media sharing in their teaching, with 99 (24.1%) embracing them occasionally, 77 (18.7%) frequently embracing them, and 54 (13.1%) always embracing them.

Lastly, regarding the use of instant messaging applications (e.g., WhatsApp or LINE) only 71 (17.3%) faculty respondents do not use and do not plan to use instant messaging in their teaching practice. Thirty-five (8.5%) of the respondents currently do not use instant messaging but plan to use it in teaching their future students. The majority of the faculty respondents (305, 74.2%) reported that they currently use instant messaging. Out of 305 faculty members who use instant messaging, 84 (20.4%) occasionally use it, 74 (18.0%) frequently use it, and 147 (35.8%) always use instant messaging.

Based on the statistical information above, instant messaging (74.2%) seems to be the most frequently used type of social media that is adopted by faculty member

respondents at Imam Abdulrahman Bin Faisal University. The second most used type of social media is media sharing (55.9%), followed by social networking (49.7%), microblogging (41.4%), video conference (33.5%), wikis (33.3%), and blogs (22.1%). Figure 6 compares the usage of social media applications among faculty members. Table 23 also shows each social media application and the participants' intentions toward using and actual use of these tools.
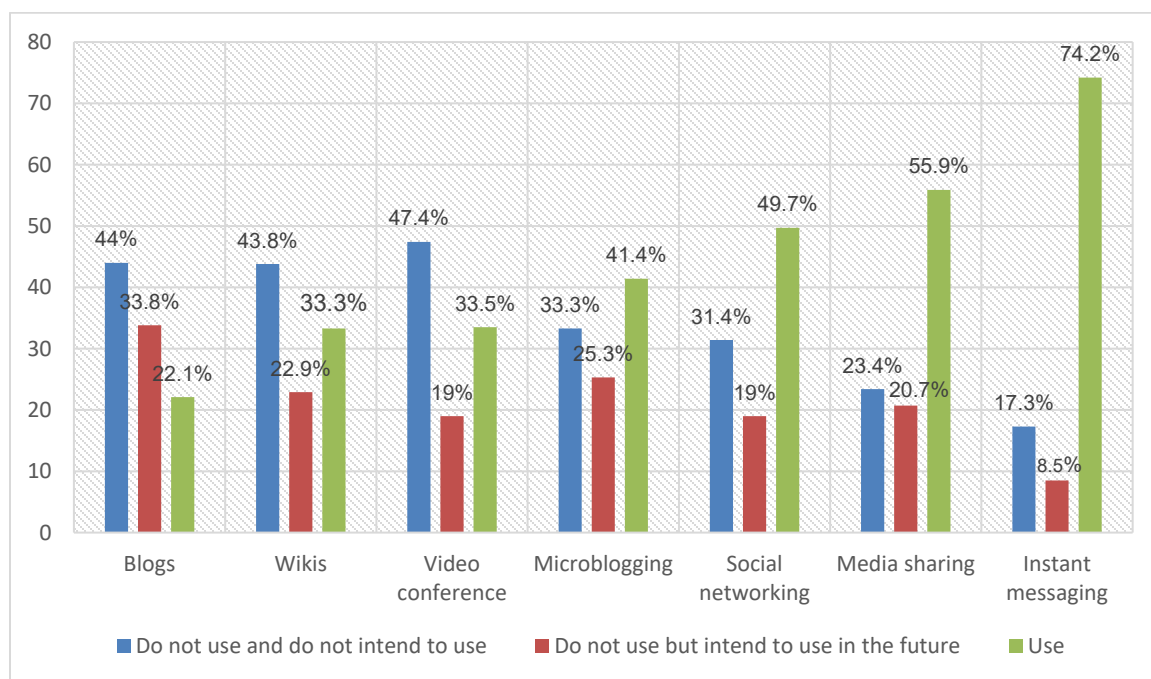
Figure 6. The percentage of the usage of social media applications among faculty respondents at Imam Abdulrahman Bin Faisal University

Table 23

Faculty Respondents' Intent and Use of Social Media in Their Instructions at Imam

Abdulrahman Bin Faisal University

Social Media Tools	Do not use and do not plan to use	Do not use but plan to use	Use occasionally	Frequently Use	Always Use
Instant messaging	71 17.3%	35 8.5%	84 20.4%	74 18%	147 35.8%
Media sharing	96 23.4%	85 20.7%	99 24.1%	77 18.7%	54 13.1%
Social networking	129 31.4%	78 19%	99 24.1%	59 14.4%	46 11.2%
Microblogging	137 33.3%	104 25.3%	87 21.2%	48 11.7%	35 8.5%
Video Conference	195 47.4%	78 19%	84 20.4%	28 6.8%	26 6.3%
Wikis	180 43.8%	94 22.9%	93 22.6%	29 7.1%	15 3.6%
Blogs	181 44%	139 33.8%	62 15.1%	14 3.4%	15 3.6%

Research Question 1

Research Question 1 concerned participants' perceptions surrounding the risks

and benefits of using social media as part of their instructional techniques. In order to

assess this, participants were asked about the perceived advantages and risks associated

with using social media in their teaching.

With respect to the advantages behind integrating social media in teaching, 307

(74.7%) participants reported that the greatest benefit of using social media was to

"improve students' interaction with faculty" followed by "improve students' interaction with other students" (260, 63.3%), "easy for instructors to share content and knowledge" (227, 55.2%), "improve collaborative learning of students" (222, 54.0%), "improve students' learning" (166, 40.4%), "improve student's satisfaction with the course" (162, 39.4%), "it could be easily integrated into my course" (144, 35.0%), and "improve student's writing ability" (68, 16.5%). Table 24 shows the participants' perception about the pedagogical values of integrating social media in teaching practice.

Table 24

Faculty Respondents' Perceptions of the Benefits of Using Social Media in Teaching

The Benefits of Social Media in Teaching	N	Percent of Cases
Improve students' interaction with faculty	307	74.7%
Improve students' interaction with other students	260	63.3%
Easy for instructors to share content and knowledge	227	55.2%
Improve collaborative learning of students	222	54.0%
Improve students' learning	166	40.4%
Improve student's satisfaction with the course	162	39.4%
It could be easily integrated into my course	144	35.0%
Improve student's writing ability	68	16.5%

Note. Participants were instructed to select all choices that applied

Participants were also given the option to write in other potential advantages of using social media in teaching. Of the 411 participants, 43 participants provided additional perceived benefits of using social media for instructional purposes. This provided information were categorized into five themes. The most commonly cited perceived additional benefit of using social media for instructional purposes revolved around the theme of the speed of social media. Nineteen faculty members stated a qualitative response which fell under this theme. They indicated that social media provides a speedy channel for learning because most students and professors have smartphones with social media applications. Also, social media enables people to share information, send reminders, send feedback, and communicate instantly any time and anywhere, so it keeps professors and students updated.

The second theme is the role of social media in enhancing students' learning. Eleven faculty members stated a qualitative response which fell under this theme. Four participants mentioned that using social media significantly contributes to enhancing student understanding, creativity, and research skills. Two participants also mentioned the effectiveness of social media in addressing different learning styles. Moreover, two participants reported that using social media has a significant role in increasing students' confidence, especially for shy students. With respect to the role of social media for faculty members, three participants indicated that social media assists them to improve their teaching by conducting opinion polls that ask students about their level of satisfaction with teaching methods. In addition, it provides an easy way to assess students' previous knowledge and provide appropriate feedback.

The third theme is the role of social media in increasing students' motivation. Nine participants indicated that most students today use social media in their daily lives. Therefore, integrating these tools in learning could help generate enthusiasm and increase students' motivation and acceptance for learning.

The next theme is the role of social media in supporting life-long learning. Six participants reported that social media plays a vital role in achieving sustainable learning. It expands the network of learning resources and keeps students continuously learning about the latest trends in their fields even after finishing their courses.

The last theme is the role of social media in building academic relationships. Four participants indicated that social media provided students a chance to share their thoughts, ideas, experiences, and projects with other students in colleges and universities around the world. Therefore, social media contributes toward building networks of relationships and friendships among university students.

In regards to the potential risks that are associated with adopting social media for teaching purposes, faculty respondents stated that "critical remarks about staff, faculty or students" is the greatest potential issue associated with adopting social media (228, 55.5%). This concern was followed by "privacy risk" (211, 51.3%), "distraction in class" (197, 47.9%), "inappropriate or illegal material posted on social media websites" (162, 39.4%), "cyberstalking" (123, 29.9%), "sharing of protected information" (102, 24.8%), "cyberbullying" (101, 24.6%), and finally "online threats" (46, 11.2%). Table 25 shows participants' perceptions of the potential risks of social media.

Table 25

Faculty Respondents' Perceptions of the Risks Associated with Integrating Social Media into Instructions

The Risks of Social Media in Teaching	N	Percent
Critical remarks about staff, faculty or students	228	55.5%
Privacy risk	211	51.3%
Distractions in class	197	47.9%
Inappropriate or illegal material posted on social media websites	162	39.4%
Cyberstalking	123	29.9%
Sharing of protected information	102	24.8%
Cyberbullying	101	24.6%
Online threats	46	11.2%

Note. Participants were instructed to select all choices that applied

Participants were also given the option to provide any other perceived drawbacks or risks to using social media for teaching purposes that they saw. Of the 411 participants, 33 participants opted to provide further information about perceived risks of using social media for instructional purposes. This information was categorized into seven themes. The most commonly cited perceived additional risk of using social media for instructional purposes revolved around the theme of wasting time. Twelve participants mentioned that integrating social media in student learning might waste student time in different ways. They mentioned that using social media might waste class time due to the slow internet speed in the university. Also, some participants indicated that employing social media requires additional time, planning, and effort from faculty

members in order to be used in an effective manner, so using these tools without prior planning would waste learning time. In addition, the use of social media in lectures could be accompanied by technical malfunctions that might waste learning time. One participant also thought that using social media might be a cause for wasting student time at home, suggesting that students may spend a long time using social media to mostly browse useless information.

The second drawback is related to social media distraction. Seven faculty members gave a qualitative response which fell under this theme. They mentioned that when students have access to these social media applications for study purposes, they can be easily distracted when they receive multiple notifications from several applications and friends.

The next theme is related to wrong or inappropriate contents that might be posted on social media. Five faculty members gave a qualitative response which fell under this theme. They mentioned that students might post incorrect information on social media and it that could be difficult for professors to correct these errors every time. Also, participants also were concerned about students posting inappropriate content that might conflict with Saudi religion or culture. In addition, some of the participants were concerned about confidentiality of the materials, suggesting that students might share the class materials on other social media platforms.

The fourth drawback is health concerns. Five faculty members mentioned that using social media for a long time could have negative effects on users' health. Two respondents mentioned that using social media might negatively influence users' necks or

visions, while three other respondents suggested that continually using social media might make students addicted to these tools.

The next theme is related to the faculty members' perceptions of potential negative impacts of social media on the relationship between professors and students. Three participants mentioned that using social media could negatively influence student-professor relationships. Two respondents reported that some students believe that communications with them via social media would dissolve boundaries between students and the professors. One other participant indicated that using social media could be used to establish prohibited relationships among students or between students and professors.

The final theme is related to privacy. Two faculty respondents mentioned that using social media might affect faculty privacy. Many faculty members do not want their students to see what they post on social media regarding their personal lives. Faculty members expressed that they want to separate their personal lives from their professional lives to maintain their privacy.

Descriptive Statistics

This section presents descriptive statistics for all 14 constructs in the DTPB framework. The statistical information presented in this section includes the mean, standard deviation, and Cronbach's Alphas. Table 40 depicts means, standard deviations, and sample sizes for each of the constructs listed below.

Intention. This construct was assessed by taking the mean of two items as measured on a 4-point Likert-type scale(1 = strongly disagree and 4 = strongly agree). The two items were designed to measure faculty member intentions to use social media

for teaching purposes. The mean of these two items was 2.71 (SD = .81) and the

Cronbach Alpha was .93. Table 26 shows the frequency of the responses for each item.

Table 26

Descriptive Statistics of the Level of Agreement of the Items That Measure Faculty

Respondents' Intentions Toward Adopting Social Media in Their Teaching

Items	SD	D	A	SA	M	SD
I intend to use social media technologies within the next semester.	32 9%	85 24%	189 52%	55 15%	2.74	.822
I will add social media technologies to my class next semester.	37 10%	93 26%	173 48%	58 16%	2.70	.860

Attitude. This construct was assessed by taking the mean of three items as

measured on a 4-point Likert-type scale (1 = strongly disagree and 4 = strongly agree).

The three items were designed to measure faculty member attitudes toward using social

media for teaching purposes. The mean of these items was 2.92 (SD = .69) and the

Cronbach Alpha was .88. Table 27 shows the frequency of the responses for each item.

Table 27

Descriptive Statistics of the Level of Agreement of the Items That Measure Faculty

Respondents' Attitude Toward Adopting Social Media in Their Teaching

Items	SD	D	A	SA	Mean	SD
Social media is useful in my teaching.	17 5%	57 16%	210 58%	77 21%	2.96	.748
The advantages of using social media outweigh the disadvantages of not using it.	26 7%	92 26%	171 47%	72 20%	2.80	.839
Using social media is a good idea.	14 4%	45 13%	225 62%	77 21.3%	3.01	.703

Perceived behavioral control. This construct was assessed by taking the mean of three items as measured on a 4-point Likert-type scale (1 = strongly disagree and 4 = strongly agree). The three items were designed to measure faculty members' perceived control in adopting social media in teaching. The mean of these three items was 2.76 (SD = .74) and the Cronbach Alpha was .67. Table 28 shows the frequency of the responses for each item.

Table 28

Descriptive Statistics of the Level of Agreement of the Items That Measure Faculty

Respondents' Perceived Behavioral Control Toward Adopting Social Media in Their

Teaching

Items	SD	D	A	SA	Mean	SD
Using the social media technologies is entirely within my control.	27 8%	68 19%	145 40%	121 34%	3.00	.91
I have the knowledge and ability to use social media.	6 2%	36 10%	202 56%	117 32%	3.19	.68
I know enough to use social media technologies.	14 4%	62 17%	196 54%	87 24%	2.98	.77

Subjective norm. This construct was assessed by taking the mean of two items as

measured on a 4-point Likert-type scale(1 = strongly disagree and 4 = strongly agree).

The two items were designed to measure respondents' perceptions of referent others'

opinions regarding the respondents' use of social media in teaching. The mean of these

two items was 2.88 (SD = .64) and the Cronbach Alpha was .90. Table 29 shows the

frequency of the responses for each item.

Table 29

Descriptive Statistics of the Level of Agreement of the Items That Measure Faculty

Respondents' Subjective Norms Toward Adopting Social Media in Their Teaching

Items	SD	D	A	SA	Mean	SD
People who influence my decision would think that I should use social media in my teaching.	40 11%	146 40%	133 37%	42 12%	2.49	.84
People who are important to me would think that I should use social media in my teaching.	33 9%	144 40%	148 41%	36 10%	2.52	.80

Ease of use. This construct was represented in this study by taking the mean of

two items as measured on a 4-point Likert-type scale (1 = strongly disagree and 4 =

strongly agree). The two items were designed to measure the perceived ease of use of

social media for teaching purposes. The mean of these two items was 3.06 (SD = .61) and

the Cronbach Alpha was .81. Table 30 shows the frequency of the responses for each

item.

Table 30

Descriptive Statistics of the Level of Agreement of the Items That Measure Faculty

Respondents' Perception of the Easiness of Adopting Social Media in Their Teaching

Items	SD	D	A	SA	Mean	SD
I feel that using social media will be easy to use.	15 4%	49 14%	219 61%	78 22%	3.00	.72
I feel that using social media will be easy to incorporate in my teaching.	13 4%	87 24%	202 57%	59 16%	2.85	.73

Perceived usefulness. This construct was represented in this study by taking the mean of five items as measured on a 4-point Likert-type scale (1 = strongly disagree and 4 = strongly agree). The five items were designed to measure perceived usefulness of social media for teaching purposes. The mean of these items was 2.50 (SD = .79) and the Cronbach Alpha was .91. Table 31 shows the frequency of the responses for each item.

Table 31

Descriptive Statistics of the Level of Agreement of the Items That Measure Faculty

Respondents' Perception of the Usefulness of Adopting Social Media in Their Teaching

Items	SD	D	A	SA	Mean	SD
I feel that using social media will help my students learn more about the subject.	17 5%	68 19%	210 58%	66 18%	2.90	.72
I feel that using social media will improve my students' satisfaction with the course.	15 4%	60 17%	225 62%	61 17%	2.92	.74
I feel that using social media will improve students' achievement.	16 4%	95 26%	190 53%	60 17%	2.81	.76
I feel that using social media will improve students' assessment of the instructor's teaching method.	20 6%	81 22%	199 55%	61 17%	2.83	.77
To help my students better learn the material, I will incorporate social media technologies in my classroom.	18 5%	58 16%	214 59%	71 20%	2.94	.74

Compatibility. This construct was assessed by taking the mean of two items as

measured on a 4-point Likert-type scale (1 = strongly disagree and 4 = strongly agree).

The two items were designed to measure the perceived compatibility of using social

media for teaching purposes. The mean of these two items was 2.92 (SD = .66) and the Cronbach Alpha was .91. Table 32 shows the frequency of the responses for each item.

Table 32

Descriptive Statistics of the Level of Agreement of the Items That Measure Faculty Respondents' Perception of the Compatibility of Social Media With Their Teaching

Items	SD	D	A	SA	Mean	SD
Using social media is compatible with the way I teach.	28 8%	79 22%	193 54%	61 17%	2.80	.81
Using social media aligns with the subject I teach.	29 8%	81 22%	193 54%	58 16%	2.78	.81

Peer influence. This construct was assessed by taking the mean of three items as measured on a 4-point Likert-type scale (1 = strongly disagree and 4 = strongly agree). The three items were designed to measure respondents' perceptions of peers' opinions regarding the respondents' use of social media in teaching. The mean of these items was 2.57 (SD = .66) and the Cronbach Alpha was .83. Table 33 shows the frequency of the responses for each item.

Table 33

Descriptive Statistics of the Level of Agreement of the Items That Measure Faculty

Respondents' Peer Influence on Adopting Social Media in Their Teaching

Items	SD	D	A	SA	Mean	SD
My colleagues are using social media technologies in their classrooms.	27 8%	130 36%	174 48%	30 8%	2.57	.70
My colleagues think I will benefit from using social media technologies in my classroom.	20 6%	124 34%	182 50%	35 10%	2.64	.732
My colleagues and friends would think that I should use social media technologies in the classroom.	35 10%	147 41%	145 40%	34 9%	2.49	.80

Superior influence. This construct was represented in this study by taking the

mean of two items as measured on a 4-point Likert-type scale (1 = strongly disagree and

4 = strongly agree). The two items were designed to measure respondents' perceptions of

their superiors' opinions regarding the respondents' use of social media in teaching. The

mean of these two items was 2.79 (SD = .78) and the Cronbach Alpha was .95. Table 34

shows the frequency of the responses for each item.

Table 34

Descriptive Statistics of the Level of Agreement of the Items That Measure Faculty

Respondents' Superior Influence on Adopting Social Media in Their Teaching

Items	SD	D	A	SA	Mean	SD
My superiors (such as college department chair or dean of the college) think it is important that I use social media technologies in my classroom.	32 8.9%	114 31.6%	164 45.4%	51 14.1%	2.65	.81
My superiors (such as college department chair or dean of the college) think that I should use social media technologies in the classroom.	36 10%	129 35.7%	148 41%	48 13.3%	2.58	.84

Student influence. This construct was assessed by taking the mean of two items as measured on a 4-point Likert-type scale (1 = strongly disagree and 4 = strongly agree). The two items were designed to measure respondents' perceptions of student's opinions regarding the respondents' use of social media in teaching. The mean of these two items was 2.61 (SD = .82) and the Cronbach Alpha was .93. Table 35 shows the frequency of the responses for each item.

Table 35

Descriptive Statistics of the Level of Agreement of the Items That Measure Faculty

Respondents' Students Influence on Adopting Social Media in Their Teaching

Items	SD	D	A	SA	Mean	SD
My students think that it is important to use social media technologies in the classroom.	18 5%	97 26.6%	193 53.5%	53 14.7%	2.78	.73
My students think that I should use social media technologies in the classroom.	21 5.8%	103 28.5%	185 51.2%	52 14.4%	2.74	.73

Self-efficacy. This construct was represented in this study by taking the mean of two items as measured on a 4-point Likert-type scale (1 = strongly disagree and 4 = strongly agree). The two items were designed to measure respondents' ratings of personal self-efficacy with relation to using social media in teaching students. The mean of these two items was 2.90 (SD = .75) and the Cronbach Alpha was .79. Table 36 shows the frequency of the responses for each item.

Table 36

Descriptive Statistics of the Level of Agreement of the Items That Measure Faculty

Respondents' Self-efficacy on Adopting Social Media in Their Teaching

Items	SD	D	A	SA	Mean	SD
I would feel comfortable using social media technologies.	31 8.6%	73 20.2%	185 51.2%	72 19.9%	2.83	.85
I could easily use social media technologies on my own.	17 4.7%	68 18.8%	186 51.5%	90 24.9%	2.97	.79

Privacy. This construct was assessed by taking the mean of three items as

measured on a 4-point Likert-type scale (1 = strongly disagree and 4 = strongly agree).

The three items were designed to measure faculty members' privacy concerns with

respect to adopting social media in for teaching purposes. The mean of these three items

was 2.67 (SD = .72) and the Cronbach Alpha was .91. Table 37 shows the frequency of

the responses for each item.

Table 37

Descriptive Statistics of the Level of Agreement of the Items That Measure Faculty

Respondents' Privacy Concerns on Adopting Social Media in Their Teaching

Items	SD	D	A	SA	Mean	SD
I am concerned that the information I submit on the Internet could be misused.	34 9.4%	96 26.6%	151 41.8%	80 22.2%	2.77	.90
I am concerned that a person can find private information about me on the Internet.	31 8.6%	102 28.3%	151 41.8%	77 21.3%	2.76	.89
I am concerned about submitting information on the Internet because it could be used in a way I did not foresee.	31 8.6%	101 28%	144 39.9%	85 23.5%	2.78	.92

Facilitating resources condition. This construct was assessed by taking the mean of two items as measured on a 4-point Likert-type scale (1 = strongly disagree and 4 = strongly agree). The two items were designed to measure the availability of resources needed to facilitate the adoption of social media in teaching. The mean of these two items was 2.77 (SD = .83) and the Cronbach Alpha was .65. Table 38 shows the frequency of the responses for each item.

Table 38

Descriptive Statistics of the Level of Agreement of the Items That Measure Faculty

Respondents' Perceptions of Having Resources Needed to Adopt Social Media in

Teaching

Items	SD	D	A	SA	Mean	SD
I have enough time to integrate social media into my teaching practice.	55 15.2%	138 38.2%	133 36.8%	35 9.7%	2.41	.86
The existence of social media policy use would encourage me to integrate social media into my teaching practice.	25 6.9%	57 15.8%	195 54%	84 23.3%	2.94	.82

Facilitating technology condition. This construct was assessed by taking the

mean of three items as measured on a 4-point Likert-type scale (1 = strongly disagree and

4 = strongly agree). The three items were designed to measure the availability of the

technology needed to facilitate the adoption of social media. The mean of these three

items was 2.53 (SD = .74) and the Cronbach Alpha was .80. Table 39 shows the

frequency of the responses for each item.

Table 39

Descriptive Statistics of the Level of Agreement of the Items That Measure Faculty

Respondents' Perception of Having Technologies Needed to Adopt Social Media in

Teaching

Items	SD	D	A	SA	Mean	SD
My university provides adequate internet connection to integrate social media into my teaching practice.	41 11.4%	95 26.3%	171 47.4%	54 15%	2.66	.87
My university provides the technical support I need to incorporate social media into my teaching practice.	54 15%	114 31.6%	156 43.2%	37 10.2%	2.49	.87
My university provides adequate training to enable me to integrate social media into my teaching practice.	53 14.7%	131 36.3%	133 36.8%	44 12.2%	2.47	.89

Table 40

Means and Standard Deviations for All DTPB Constructs Reported by Faculty

Respondents at Imam Abdulrahman Bin Faisal University

Constructs	N	Mean	Std. Deviation
Behavioral Control	361	3.06	.61
Attitude	361	2.92	.69
Ease of Use	361	2.92	.66
Self-Efficacy	361	2.90	.75
Usefulness	361	2.88	.64
Compatibility	361	2.79	.78
Privacy	361	2.77	.83
Student Influence	361	2.76	.74
Intention	361	2.72	.81
Facilitating Resources	361	2.67	.72
Superior Influence	361	2.61	.82
Peer Influence	361	2.57	.66
Facilitating Technology	361	2.54	.74
Subjective Norm	361	2.50	.78

Data Screening

This section discusses missing data, univariate and multivariate outliers, influential cases, reliability of the collected scores, and the validity of the scores.

Missing data. As stated earlier, 411 faculty members participated in this study. Out of these participants, 361 faculty members provided complete data for all three sections. The remaining 50 participants only provided complete data for the first and

second sections. As such, data for 411 participants were used for analyses pertaining to the first two sections, whereas data for only 361 participants were used for analyses pertaining to the third section.

Detecting outliers. According to Field (2009), outliers are cases that considerably differ from the trend of the other scores. Since the existence of the outliers may affect the regression model by affecting the regression coefficients, it is important to assess and deal with the outliers (Field, 2009). Univariate outliers and multivariate outliers are two different kinds of outliers that should be examined.

One way to detect univariate outliers is by computing z-scores of each construct and comparing these z-scores to a predetermined cut-off point (Tabachnick & Fidell, 2007). If the sample size is greater than 100, Hair et al. (2010) recommend checking for z-scores that are more extreme than 3.5 or 4 or -3.5 or -4 because they are potential univariate outliers. SPSS was used to generate the range of z-scores within each construct. This data provided by SPSS shows that there is no value greater than 3.5 or smaller than -3.5 in any of the constructs. Thus, it is concluded that there are no univariate outliers. Table 41 shows the minimum and maximum z-scores for each construct.

Table 41

Standardized Scores for the Mean of Each Construct in the DTPB Reported by Faculty

Respondents at Imam Abdulrahman Bin Faisal University

Construct	N	Minimum	Maximum
Intention	361	-2.1	1.57
Attitude	361	-2.79	1.56
Behavioral Control	361	-3.36	1.54
Subjective Norm	361	-1.92	1.91
Ease of Use	361	-2.90	1.62
Usefulness	361	-2.94	1.75
Compatibility	361	-2.30	1.56
Peer Influence	361	-2.39	2.18
Superior Influence	361	-1.98	1.70
Student Influence	361	-2.39	1.68
Self-Efficacy	361	-2.54	1.48
Privacy	361	-2.13	1.48
Facilitating Technology	361	-2.08	1.98
Facilitating Resources	361	-2.32	1.84

Multivariate outliers can be evaluated using Mahalanobis' distance test.
Mahalanobis' distance is a measurement of the distance of each score from the means of
all the variables (Field, 2009). In order to determine the multivariate outliers,
Mahalanobis' distance scores were compared to predefined critical chi-square values
(Field, 2009). Critical chi-square values are determined based on the degrees of freedom
and Alpha levels (Field, 2009). This procedure was done for each of the regression
analyses in this study.

Preliminary analyses were conducted for all of the multivariate regression
analyses to examine whether there were outliers that might influence results. Based on

Field's (2009) recommendation, critical chi square values were found to be used for the identification of outliers. This chi square critical value was 16.27 for the preliminary analyses regarding the regressions on the following outcome variables: intention to use social media for teaching purposes, attitudes toward using social media for instructional purposes, and subjective norms' influence on faculty intention. The critical chi-square value was the same for these three preliminary analyses because these analyses all had three predictor variables. When comparing the Mahalanobis' distance scores to 16.27, several outliers were discovered. Specifically, case 87 was an outlier with regards to intentions, case 258 was an outlier with regards to attitudes, and 184, 163, 39, 172, 266, 77, 26, and 63 were outliers for subjective norms. Table 42 shows the multivariate outlier case number and Mahalanobis' distance scores for each of these regression models.

Table 42

Mahalanobis' Distance and Case Number for Multivariate Outliers in Intention, Attitude, and Subjective Norms' Multiple Linear Regressions

Regression Outcome Variable	Case Number	Mahalanobis' Distance
Intention	87	17.4
Attitude	258	16.42
Subjective Norm	184	22.98
Subjective Norm	163	22.21
Subjective Norm	39	20.87
Subjective Norm	172	20.15
Subjective Norm	266	20.15
Subjective Norm	77	17.88
Subjective Norm	26	16.72
Subjective Norm	63	16.38

The preliminary analyses for perceived behavioral control required a different critical value, 18.47, because there were four predictors. By comparing the Mahalanobis' distance scores to 18.47, two multivariate outliers were detected. Table 43 shows the multivariate outlier cases number and their Mahalanobis' distance scores.

Table 43

Mahalanobis' Distance and Case Number for Multivariate Outliers in Perceived

Behavioral Control's Regression

Case Number	Mahalanobis' Distance
77	25.40
202	19.29

In order to examine the influence of these multivariate outliers on the regression models, the researcher ran each regression with and without the outliers and no significant changes were observed between the analyses. Appendices I, J, K, and L present regression analyses for intention, attitude, subjective norm, and behavioral control, respectively, after the deletion of outliers.

Also, Field (2009) recommends that before excluding multivariate outliers from a statistical analysis, researchers should use Cook's distance test. Cook's distance is used to examine whether multivariate outliers have an impact on a dependent variable and on predictors' variables (Stevens, 2009). Stevens (2009) suggests that there is no need to exclude an observation being a multivariate outlier from regression analysis if the Cook's distance value for that observation is smaller than 1. In this study, all Cook's distances were less than 1. As such, the researcher decided to include all multivariate outliers in the regression analysis. Table 44 shows the maximum Cook's distance values in each regression model.

Table 44

The Maximum Cook's Distance Values in Intention, Attitude, and Perceived Behavioral

Control Regression Models

Cook's Distance	Maximum
Intention	.09
Attitude	.08
Subjective Norm	.16
Perceived behavioral control	.15

The validity of the scores. In order to evaluate the validity of the data of the instrument, the researcher conducted an exploratory factor analysis (EFA). Principal Axis Factoring with Promax rotation was performed four times. Stevens (2009) suggested that any factor loading greater than .4 should be considered as significant loading.

The first EFA included items that should represent the behavioral intention, attitude, subjective norm, and perceived control constructs. The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was .833, which suggest that conducting a factor analysis on this dataset is acceptable (Hair et al., 2010). 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, as represented in Appendix H. After deleting this item and rerunning the EFA, all the items were loaded on the factors that they were supposed to be loaded on. Table 45 shows the items and the factor loading for each item.

Table 45

Summary of EFA Items and Factors Loadings from Principal Axis Factoring with

Promax Rotation for Intention and its Antecedents

	Factor Loading			
	Attitude	Subjective Norm	Perceived behavioral control	Intention
2. I intend to use social media technologies within the next semester.				.79
3. I will add social media technologies to my class next semester.				.75
4. Social media is useful in my teaching.	.71			
5. The advantages of using social media outweigh the disadvantages of not using it.	.82			
6. Using social media is a good idea.	.88			
16. Using the social media technologies is entirely within my control.			.42	
17. I have the knowledge and ability to use social media.			.91	
34. I know enough to use social media technologies.			.65	
14. People who influence my decision would think that I should use social media in my teaching.		.85		
15. People who are important to me would think that I should use social media in my teaching.		.94		

Note: Factor loadings smaller than .40 were suppressed

The second EFA included all of the items that were supposed to represent the predictors for attitude. These predictors were perceived usefulness, perceived ease of use, and compatibility. The KMO was .91, which suggests that conducting a factor analysis on this dataset is acceptable (Hair et al., 2010). When specifying three as the number of extracted factors, all items loaded on the factors they were supposed to be loaded on. Table 46 depicts the pattern matrix.

Table 46

Summary of EFA Items and Factors Loadings from Principal Axis Factoring with

Promax Rotation for Attitude's Antecedents

	Factor Loading		
	Usefulness	Compatibility	Ease of Use
7. I feel that using social media will be easy to use.			.82
8. I feel that using social media will be easy to incorporate in my teaching.			.80
9. I feel that using social media will help my students learn more about the subject.	.52		
10. I feel that using social media will improve my students' satisfaction with the course.	.77		
11. I feel that using social media will improve students' achievement.	.69		
12. I feel that using social media will improve students' assessment of the instructor's teaching method.	.93		
13. To help my students better learn the material, I will incorporate social media technologies in my classroom.	.52		
25. Using social media is compatible with the way I teach.		.99	
26. Using social media aligns with the subject I teach.		.84	

Note: Factor loadings smaller than .40 were suppressed

The third EFA includes all items which were supposed to predict subjective norms. These predictors were student influence, peer influence, and superiors' influence. The KMO was .79, which suggests that conducting factor analysis on this dataset is acceptable (Hair et al., 2010). The pattern matrix shows that all items significantly load on their factors, as presented in Table 47.

Table 47

Summary of EFA Items and Factors Loadings from Principal Axis Factoring with

Promax Rotation for Predictors of Subjective Norms

	Factor Loading		
	Peer Influence	Students' Influence	Superiors' Influence
18. My colleagues are using social media technologies in their classrooms.	.61		
19. My colleagues think I will benefit from using social media technologies in my classroom.	.99		
20. My colleagues and friends would think that I should use social media technologies in the classroom.	.64		
21. My superiors (such as college department chair or dean of the college) think it is important that I use social media technologies in my classroom.			.88
22. My superiors (such as college department chair or dean of the college) think that I should use social media technologies in the classroom.			.97
23. My students think that it is important to use social media technologies in the classroom.		.92	
24. My students think that I should use social media technologies in the classroom.		.94	

Note: Factor loadings smaller than .40 were suppressed

The fourth EFA includes items that are supposed to represent the items for the predictors for perceived behavioral control. Perceived behavioral control's predictor variables include self-efficacy, facilitating resources, facilitating technology, and privacy. The KMO was .76, which suggests that conducting factor analysis on this dataset is acceptable (Hair et al., 2010). When specifying the number of extracted factors to four, the pattern matrix shows that all items significantly loaded on their factors, as shown in Table 48.

Table 48

Summary of EFA Items and Factors Loadings from Principal Axis Factoring with

Promax Rotation for Perceived Behavioral Control's Predictors

	Factor Loading			
	Privacy Concern	Facilitating Technology	Self-efficacy	Facilitating Resources
27. I have enough time to integrate social media into my teaching practice.				.55
28. The existence of social media policy use would encourage me to integrate social media into my teaching practice.				.73
30. My university provides adequate internet connection to integrate social media into my teaching practice.		.65		
31. My university provides the technical support I need to incorporate social media into my teaching practice.		.99		
29. My university provides adequate training to enable me to integrate social media into my teaching practice.		.60		
32. I would feel comfortable using social media technologies.			.81	
33. I could easily use social media technologies on my own.			.78	
35. I am concerned that the information I submit on the Internet could be misused.	.84			
36. I am concerned that a person can find private information about me on the Internet.	.94			
37. I am concerned about submitting information on the Internet because it could be used in a way I did not foresee.	.89			

Note. Factor loadings smaller than .40 were suppressed

The reliability of the scores. In order to determine the reliability of the scores

collected by the survey, the researcher used Cronbach's Alpha to test the internal

consistency of the survey items. Nunnally (1978) recommends 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 fourteen constructs had Cronbach's Alphas greater than .7. However,

facilitating resources ($\alpha = .65$) and perceived behavioral control ($\alpha = .67$) were below the

recommended .7 threshold. One possible explanation for these low Cronbach's Alpha

levels could be due to the number of the 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). Fields (2009) explains that

having too few items representing constructs may sometimes result in low Cronbach

Alpha levels. Therefore, it is not unexpected that these constructs could have Cronbach's

Alphas of less than .7.

Although the facilitating resources ($\alpha = .65$) and perceived behavioral control ($\alpha = .67$) constructs have Cronbach's Alpha lower than the minimal generally-agreed upon

levels ($\alpha = .7$), 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, McMurray, and Cozens (2004) state that a Cronbach's Alpha from .5

to .7 represents 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 49 shows a summary of the Cronbach's Alphas for all constructs.

Table 49

Cronbach's Alpha for All DTPB's Constructs in the Questionnaire Based on Faculty's Responses at Imam Abdulrahman Bin Faisal University

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

Multiple Regression Analysis

In order to identify the predictors of college faculty's intentions to use social media in their future teaching, the researcher 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.

Assumptions of behavioral intention regression. There are several assumptions associated with regression that must be satisfied. These assumptions are that the variables are normally distributed, linearity in the relationship among the variables, homoscedasticity in the residuals, and no evidence of multicollinearity amongst the variables.

First, the assumption of normality was tested by creating a residual histogram from the regression analysis. The histogram of the standardized residuals showed no major departure from the normal distribution, as shown in Figure 7. Thus, the normality assumption was not violated.

Linearity was assessed using a scatterplot of standardized predicted values by standardized residuals, as shown in Figure 8. According to Tabachnick and Fidell (2007, p.127), "If nonlinearity is present, the overall shape of the scatterplot is curved instead of rectangular." Figure 8 shows that there is no curvature presented in the relationship between the intention and the predictors. Thus, the linearity assumption was met.

With respect to the assumption of homoscedasticity, it is met when "the band enclosing the residuals is approximately equal in width at all values of the predicted DV"

(Tabachnick & Fidell, 2007, p.127). In this study, the residuals scatter plot (Figure 8)

shows that there was no change in the width size of the band. Thus, the homoscedasticity

assumption was met.

Regarding multicollinearity, variation inflation factor (VIF) in the regression

output was utilized to examine multicollinearity assumption. According to Hair et al.,

2010, VIF suggests a problem with multicollinearity when it is above 10. The VIF values

presented in the coefficient table 51 showed that there were no problems with

multicollinearity because all VIF scores were near 1.0.

Figure 7. Histogram of residuals for assessing normality of intention
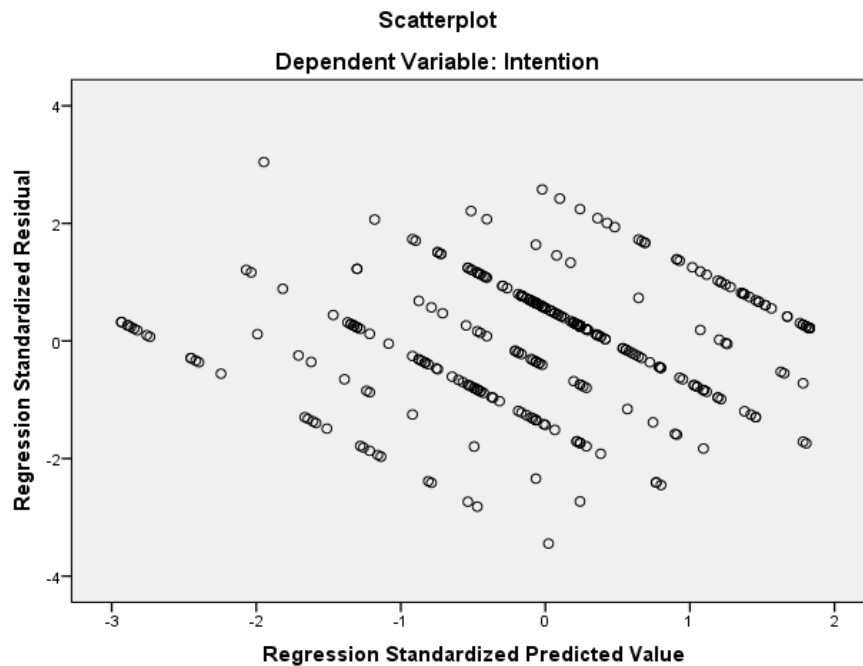
Figure 8. Scatter plot for assessing linearity and homoscedasticity of intention

Results of behavioral intention regression. Multiple regression results show that the regression model was significant [F (3, 357) = 195.51, $p < .05$] with R^2 and adjusted $R^2 = .62$. This reveals that 62% of the variation in faculty members' intentions was explained by this model as shown in table 50.

Using beta weights, the researcher determined which predictors significantly contributed in explaining the variability in intention. Table 51 shows that attitude was the strongest significant predictor for intentions ($\beta = .66$, p < .05). Subjective norm also had a significant impact on intention ($\beta = .19$, p<.05). However, perceived behavioral control was not a significant predictor for intention. As result, the null hypothesis was rejected. In other words, at least one of the predictors accounted for a significant amount of variance in intention.

Table 50

Summary of Regression Analysis for the Predictors Explaining the Responding Faculty

Intentions

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.79ᵃ	.62	.62	.50	.621	195.15	3	357	<.001

Note: Predictors: (Constant), Subjective norm, Behavioral Control, Attitude

Table 51

Coefficients for the Predictors Explaining the Responding Faculty's Intentions

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	-.18	.16		-1.11	.27		
Attitude	.78	.05	.66	16.31	<.001	.65	1.55
Behavioral Control	.04	.05	.03	.92	.36	.90	1.11
Subjective norm	.20	.04	.19	4.85	<.001	.70	1.42

Note: Dependent Variable: Intention

Since this research is exploratory in nature, the researcher made further attempts to understand the factors that affect attitude, subjective norm, and perceived behavioral control. Thus, after conducting the intention regression, the researcher conducted three other multiple regression analyses to identify factors that significantly predicted attitude, subjective norm, and perceived behavior control.

Attitude regression. Based on the DTPB framework, there are three factors that are considered significant 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.

      Assumptions about attitude regression. To examine normality assumptions, the researcher used the histogram of standardized predicted values by standardized residuals. Figure 9 showed no major departure from the normal distribution. Thus, the normality assumption was not violated.

      By looking at the scatterplot of standardized predicted values by standardized residuals (Figure 10), there was no curvature presented in the relationship between the attitude and the predictors. Thus, the linearity assumption was met.

      With respect to the assumption of homoscedasticity, the residuals scatter plot (Figure 10) shows that there was no change in the width size of the band that encloses the residual dots. Thus, the homoscedasticity assumption was met.

      Regarding multicollinearity, VIFs in the regression output indicated no problem with multicollinearity because all VIF scores were near 2.0, as shown in Table 53.

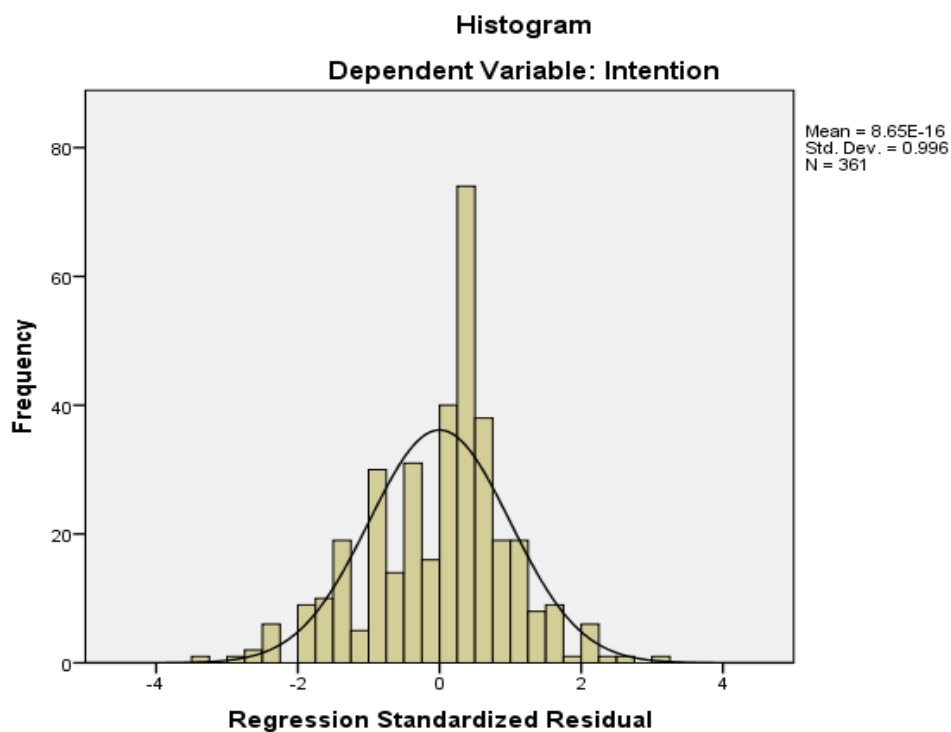*Figure 9.* Histogram of residuals for assessing normality of attitude
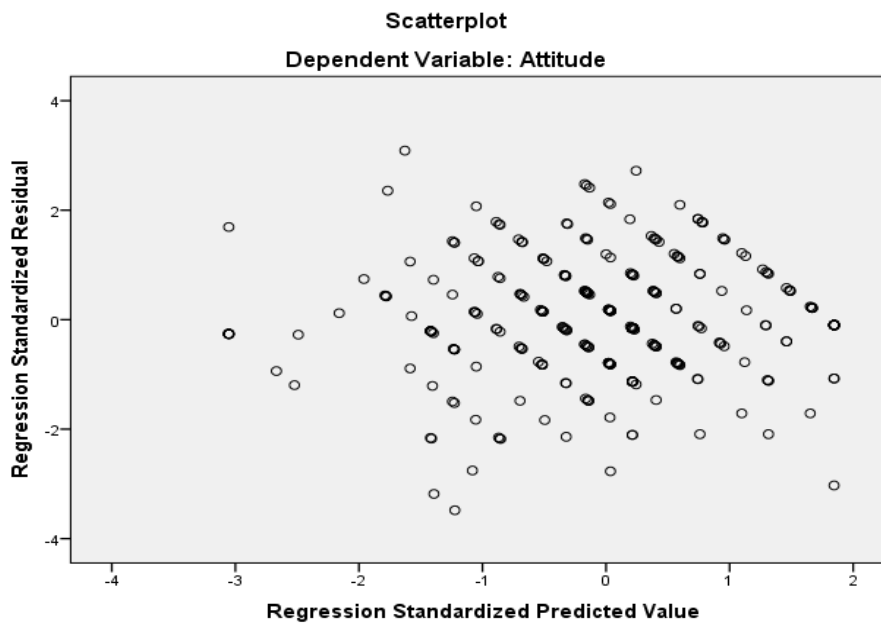
Figure 10. Scatter plot for assessing linearity and homoscedasticity of attitude

Results of attitude regression. Multiple regression results show that the

regression model was significant [F (3, 357) = 372.04, p < .05] with R^2 and adjusted R^2 =

.76. This reveals that 76% of the variation in faculty members' attitudes was explained by

this model as shown in table 52.

Using beta weights, the researcher determined which predictors were significant

contributor to the explanation of attitude. Referring to Table 53, 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 predictors for attitude (β = .22, p < .05).

Table 52

Summary of Regression Analysis for Predictors Explaining the Responding Faculty's

Attitudes

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.87[a]	.76	.76	.34	.76	372.04	3	357	<.001

Note: Predictors: (Constant), Compatibility, Ease of Use, Usefulness

Table 53

Coefficients for Predictors Explaining the Responding Faculty's Attitude

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.11	.09		1.21	.23		
	Ease of Use	.23	.04	.22	5.93	<.001	.48	2.07
	Usefulness	.53	.05	.49	11.24	<.001	.35	2.84
	Compatibility	.22	.04	.25	6.08	<.001	.42	2.40

Note: Dependent Variable: Attitude

Subjective norm regression. Based on the DTPB framework, there are three factors that are considered significant predictors for subjective norm including 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.

Examining the assumptions of subjective norm regression. To examine normality assumption, the researcher used the histogram of standardized predicted values by standardized residuals. Figure 11 showed no major departure from the normal distribution. So, there was no problem with normality.

By looking at the scatterplot of standardized predicted values by standardized residuals (Figure 12), there was no curvature presented in the relationship between the attitude and the predictors. Thus, the linearity assumption was met.

With respect to the assumption on of homoscedasticity, the residuals scatter plot (Figure 12) shows that there was no change in the width size of the band that enclose the residual dots. Thus, the homoscedasticity assumption was met.

Regarding multicollinearity, VIFs in the regression output indicated no problem with multicollinearity because all VIF scores were near 2.0, as shown in Table 55.
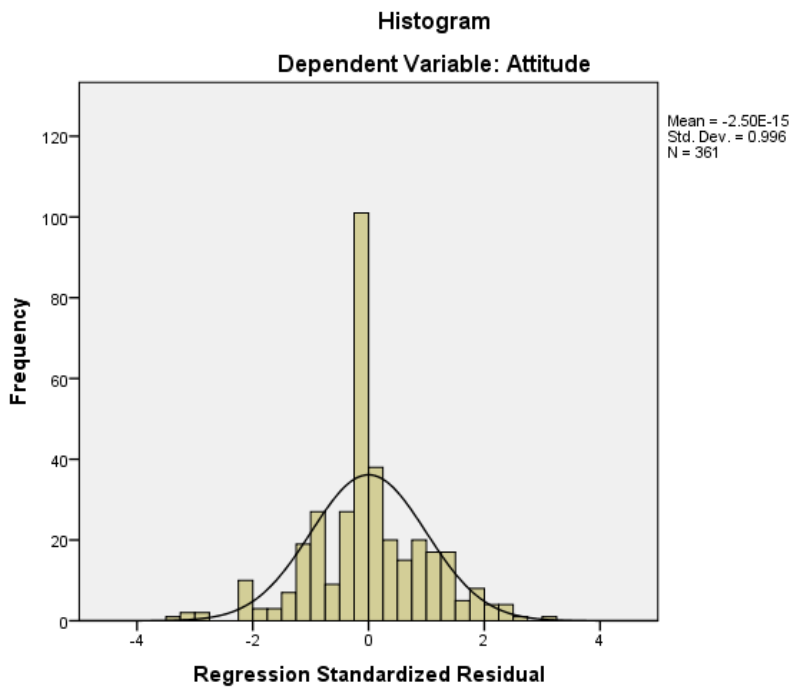

*Figure 11*. Histogram of residuals for assessing normality of subjective norm
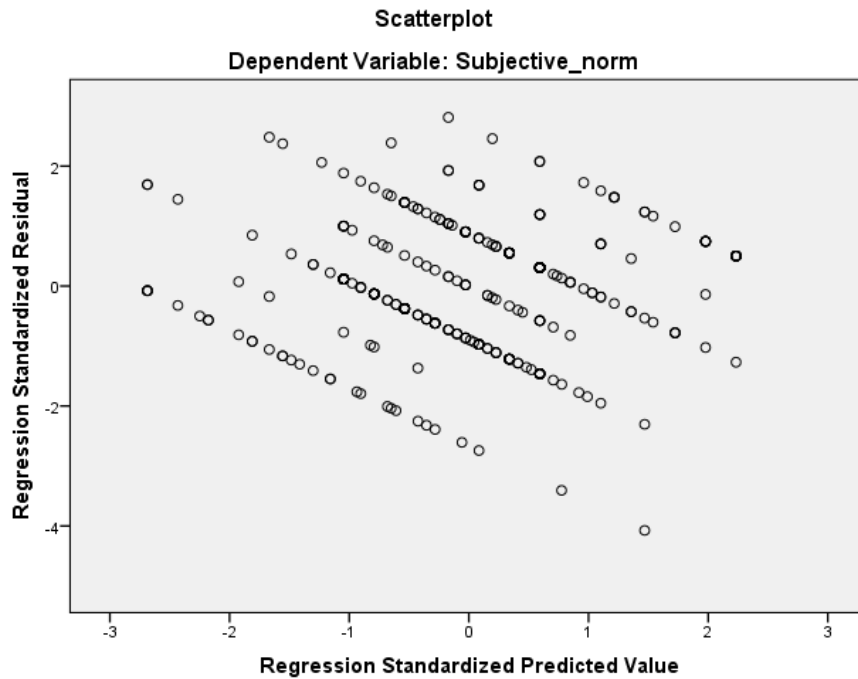
Figure 12. Scatter plot for assessing linearity and homoscedasticity of subjective norm

Results of subjective norm regression. Multiple regression results show that the regression model was significant [F (3, 357) = 110.97, p < .05] with R^2 and adjusted R^2 = .48. This reveals that 48% of the variation in faculty members' subjective norm was explained by this model as shown in table 54.

Using beta weights, the researcher determined which predictors is significant contributor to the explanation of the subjective norm. Referring to Table 55, peer influence was the strongest predictor for the subjective norm (β = .35, p < .05). Student influence also had a significant impact on the subjective norm (β = .26, p < .05). Lastly, superior influence was the weakest significant predictors for the subjective norm (β = .21, p < .05).

Table 54

Summary of Regression Analysis for Predictors Explaining the Responding Faculty's

Subjective Norms

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.70[a]	.48	.48	.57	.48	110.97	3	357	<.001

Note: Predictors: (Constant), Student Influence, Peer Influence, Superior Influence

Table 55

Coefficients for Predictors Explaining Responding Faculty's Subjective Norms

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	VIF
1 (Constant)	.15	.13		1.15	.253		
Peer Influence	.42	.06	.35	6.64	<.001	.53	1.89
Superior Influence	.20	.05	.21	3.93	<.001	.52	1.92
Student Influence	.28	.05	.26	5.53	<.001	.65	1.54

Note: Dependent Variable: Subjective norm

Perceived behavioral control regression. Based on the DTPB framework, there are three factors that are considered significant predictors for perceived behavior control, including self-efficacy, facilitating resources, and facilitating technology. The researcher 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.

Examining the assumptions of perceived control regression. To examine that the normality assumption was met, the researcher used the histogram of standardized predicted values by standardized residuals. Figure 13 showed no major departure from the normal distribution. Therefore, there was no problem with normality.

By looking at the scatterplot of standardized predicted values by standardized residuals (Figure 14), there was no curvature presented in the relationship between the attitude and the predictors. Thus, the linearity assumption was met.

With respect to the assumption on of homoscedasticity, the residuals scatter plot (Figure 14) shows that there was no significant change in the width size of the band that enclose the residual dots. Thus, the homoscedasticity assumption was met. Regarding multicollinearity, VIFs in the regression output indicated no problem with multicollinearity because all VIF scores were near 1.0, as shown in Table 57
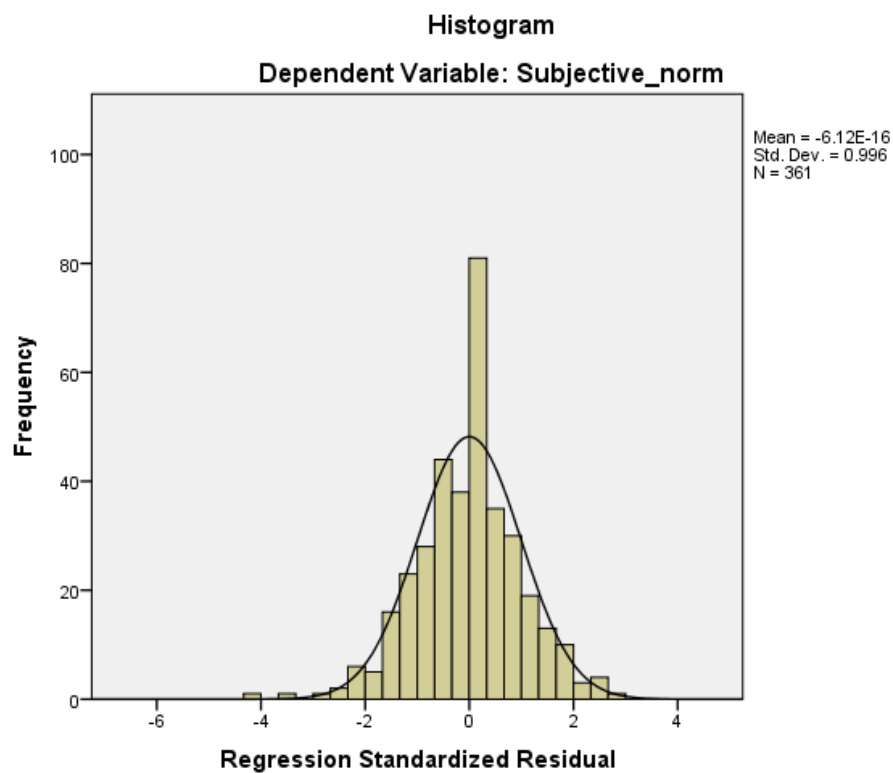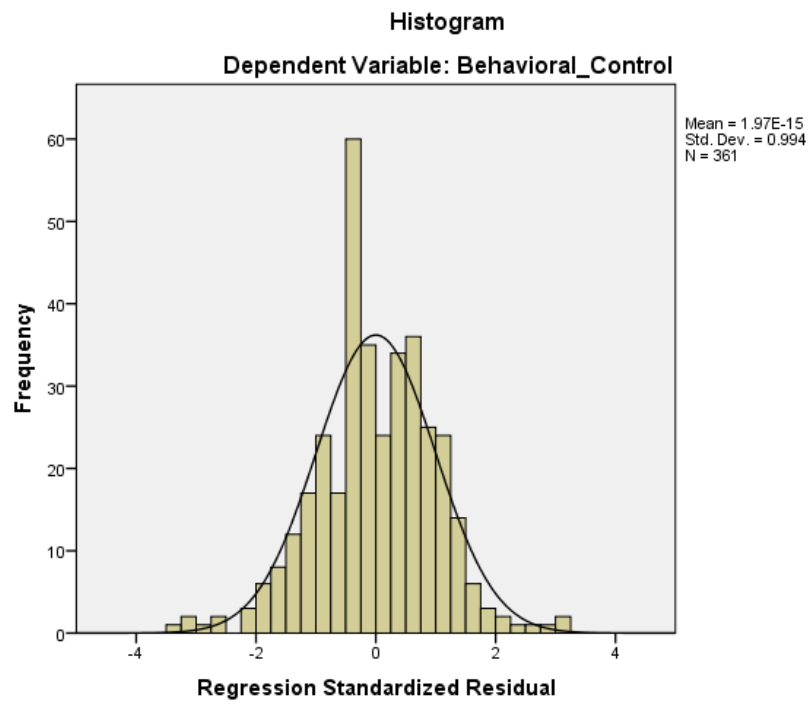
Figure 13. Histogram of residuals for assessing normality of percived behavioral control
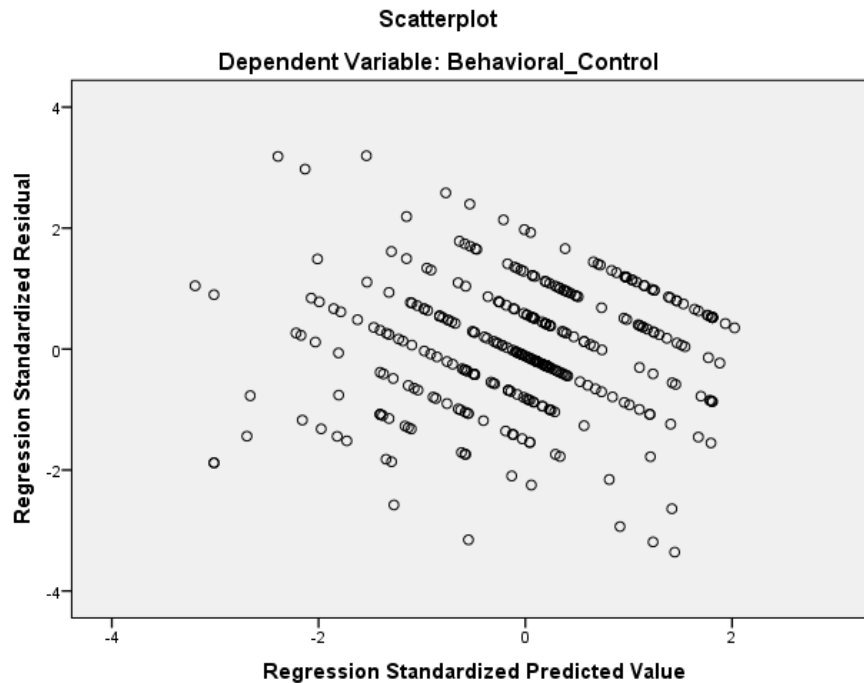
Figure 14. Scatter plot for assessing linearity and homoscedasticity of perceived behavioral control

Results of perceived behavioral control regression. Multiple regression results show that the regression model was significant [F (4, 356) = 57.47, p < .05] with R^2 and the adjusted R^2 = .39. This reveals that 39% of the variation in faculty members' behavioral control was explained by this model as shown in table 56.

Using beta weights, the researcher determined which predictors significantly contributed to the explanation of the perceived behavioral al control. As can be seen in Table 57, self-efficacy was the strongest predictor for the perceived behavioral control (β = .57, p < .05). Privacy concerns also had a significant impact on perceived behavioral control (β = .15, p < .05). Privacy concern 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 was adversely affected perceived behavioral control.

Therefore, for each 1 standard deviation increase in perceived behavioral control, there

was 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 significant factor in predicting perceived behavioral control among

faculty ($\beta = -.07$, $p > .05$).

Table 56

Summary of Regression Analysis for Predictors Explaining the Responding Faculty's

Perceived Behavioral Control

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.63[a]	.39	.39	.48	.39	57.47	4	356	<.001

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

Table 57

Coefficients for Predictors Explaining the Responding Faculty's Perceived Behavioral Control

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	1.29	.14		9.10	<.001		
Self-Efficacy	.47	.04	.57	11.54	<.001	.704	1.42
Privacy	.11	.03	.15	3.49	.001	.972	1.03
Facilitating technology	-.07	.04	-.09	-1.73	.085	.709	1.41
Facilitating Resources	.11	.04	.13	2.69	.007	.701	1.43

Note: Dependent Variable: Behavioral Control

Summary of Regression Result

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 15 summarizes the results for all the conducted regression analyses.
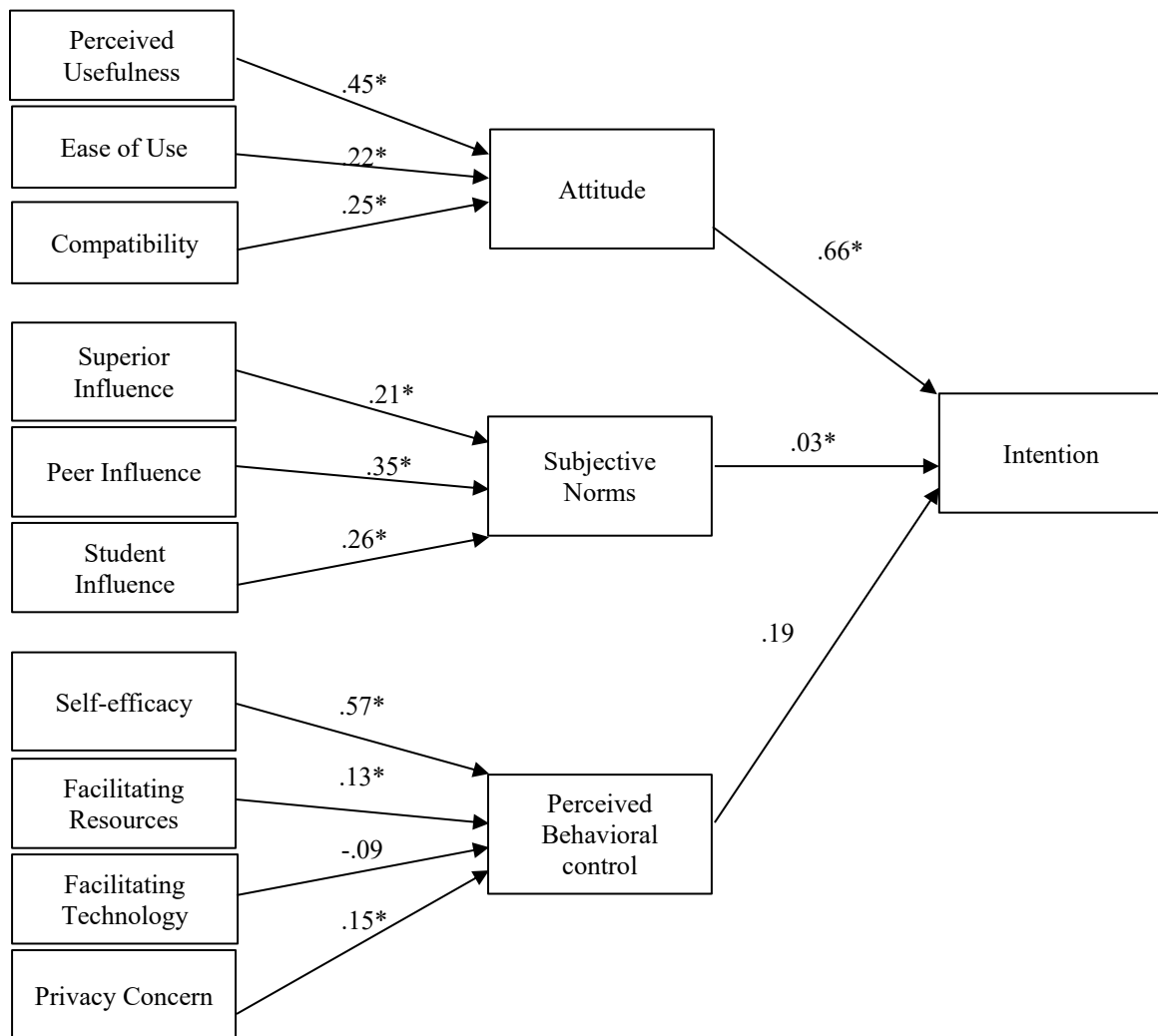
Figure 15. Model summarizing relationships among constructs

Research Question Three

Using independent t-tests, the data were analyzed to examine if 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 shows 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 as shown in

Table 58 Also, the researcher investigated the influence of gender across all 14

constructs, finding no significant difference between male and female faculty responses.

Appendix M shows the results of the independent t tests.

Table 58

Independent T-Test Examining Gender Differences Between the Responding Faculty's

Intentions to Incorporate Social Media in their Teaching

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower	Upper
Intention	Equal variances assumed	2.965	.086	.068	359	.945	.00635	.09268	-.17591	.18861
	Equal variances not assumed			.072	239.495	.943	.00635	.08852	-.16803	.18072

In order to examine whether the faculty member nationality (Saudi vs. non-Saudi)

has an influence on faculty respondent intentions to adopt social media in pedagogy, the

researcher conducted an independent t-test. Equal variance was assumed because

Levene's test was not significant [F (359) = .005, p = .95]. The result shows 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 social media, t (359) = -

1.47, p > .05 as shown in Table 59.

Table 59

Independent T-Test Demonstrating Nationality of the Responding Faculty's Intentions to

Incorporate Social Media in their Teaching

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Intention	Equal variances assumed	.005	.946	-1.472	359	.142	-.12963	.08808	-.30285	.04360
	Equal variances not assumed			-1.460	280.626	.145	-.12963	.08876	-.30434	.04508

In addition, in order to examine whether faculty members' academic rank has impact on their intention to adopt social media in pedagogy, the researcher conducted a one-way ANOVA test. The F for the one-way ANOVA was not statistically significant; $F(4,356) = .890$, $p > .05$ as shown in Table 60. That is, there is no statistically significant difference between the groups attributed to their academic rank.

Table 60

One Way ANOVA Demonstrating Differences in the Responding Faculty's Intentions

According to their Academic Rank

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.36	4	.59	.89	.47
Within Groups	235.85	356	.66		
Total	238.21	360			

In order to examine whether faculty members' colleges have an impact on their intention to adopt social media in pedagogy, the researcher conducted a one-way

ANOVA test. The result shows that the F of the one-way ANOVA test was statistically significant; $F(3, 357) = 5.430$, $p < .05$ as shown in Table 61. Tukey's test (table 62) shows 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 ($M = 2.86$).

Table 61

One Way ANOVA Demonstrating Differences in the Responding Faculty's Intentions According to Their Colleges

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.39	3	3.47	5.43	.001
Within Groups	227.82	357	.64		
Total	238.21	360			

Table 62

Tukey Test Demonstrating Differences in the Responding Faculty's Intentions According to Their Colleges

(I) College	(J) College	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Arts and Education colleges	Sciences and Management colleges	.21	.10	.16	-.05	.47
	Engineering colleges	.16	.17	.76	-.26	.59
	Health colleges	**.46***	**.12**	**.001**	**.16**	**.77**
Sciences and Management colleges	Arts and Education colleges	-.21	.10	.16	-.47	.05
	Engineering colleges	-.05	.17	.99	-.50	.40
	Health colleges	.25	.13	.21	-.08	.59
Engineering colleges	Arts and Education colleges	-.16	.17	.76	-.59	.26
	Sciences and Management colleges	.05	.17	.99	-.40	.50
	Health colleges	.30	.18	.36	-.16	.76
Health colleges	**Arts and Education colleges**	**-.46***	**.12**	**.001**	**-.77**	**-.16**
	Sciences and Management colleges	-.25	.13	.21	-.59	.08
	Engineering colleges	-.30	.18	.36	-.78	.18

Note: The mean difference is significant at the 0.05 level

To examine whether faculty members' age or teaching experience were associated with their intention, the researcher used the Pearson correlation. The results also showed that there was no significant relationship between faculty members' age and their intention, r (361) = -.02, *p* = .68. Also, there was no significant relationship between faculty members' teaching experience and their intention, r (361) = -.06, *p* = .28. However, the result suggests that there was a significant correlation between teaching experience and age; r (361) = .79, *p* < .05. Table 63 shows the correlations between length of teaching experience and age. Therefore, age and teaching experience were not associated with participants' intention to use social media for instructional purposes.

Table 63

Pearson Correlations Among the Responding Faculty's Intentions, Ages, and Teaching Experience in Years

	Intention	Teaching Experience	Age
Intention	–	–	–
Teaching Experience	-.06	–	–
Age	-.02	.794	–

Note: Correlation is significant at the 0.01 level (2-tailed)

Open- Ended Question Analysis

The last section of the survey was an optional, open-ended question. Faculty members were asked one of two questions. Faculty members who used social media tools in their teaching were asked to provide reasons that prompted them to use these tools. Faculty members who did not use social media tools for teaching purposes were asked to provide reasons that prevented them from using these tools. Of the 411 participants, 129 participants opted to provide further information about their motives for using social media in their teaching. 102 respondents provided reasons why they did not use social media for instructional purposes.

The qualitative data participants provided was categorized into four themes. The most commonly cited reasons for using social media for instructional purposes revolved around the theme of the usefulness of social media in improving learning processes. One hundred thirty-two participants stated a qualitative response which fell under this theme. Participant 54, for example, stated, "I used social media because it provides many good learning resources such as videos to explain some complex concepts in an excellent manner and show some of the science experiments that I may not be able to do in the classroom." Participant 74 stated, "It enhances the values of communication between me and my students and helps me provide all aspects of assistance to all my students". Participant 406 stated, "Social media assists professors to easily and speedily communicate and interact with students, to study students' reactions to the subject matter and teaching methods, to share research and studies, to schedule office hours, and to publish the necessary announcements to students." As can be seen in these quotes,

instructors find that the use of social media improves learning processes. Other ways in which social media is used to improve learning processes in the classroom include improving students' understanding; making the teaching process more exciting and interesting; enhancing collaborative learning among students; assisting faculty to provide faster feedback; establishing a fast communication channel among students and between students and faculty; advertising and reminding students about activities, exams, and workshops; providing a large learning network and resources; and supporting life-long learning.

The second theme revolved around the idea of faculty members recognizing popular tools utilized by the current generation and tailoring their teaching styles to accommodate the use of these tools. Thirty faculty members mentioned that they use social media because their students use social media. For example, Participant 211 stated, "I used social media tools because of the nature of the students of the current generation, their mastery of using these tools, and their preference for the use of social media." Participant 315 stated "Social media was used in order to meet students' desires to use social media for collaborative work." Participant 345 stated, "The thing that made me use social media with my students is that my students are attached to these tools and using these tools will be the fastest way to reach them."

The third theme found in the qualitative responses revolves around the ease of using social media. Eighteen faculty members assert that one of their motives for using social media in teaching is because social media is easy to use and does not required

advanced skills in using technology. Further, these tools have become more common among people because it is easy to register, search, and post information using them.

The final theme regarding the motivational reasons to adopt social media is compatibility. Seven participants mentioned that one of the reasons that pushed them to use social media is its compatibility with the course they are teaching. Participant 172, for example, stated, "I used blogging. The reason is that the nature of the material I teach requires students to continuously write and share their thoughts."

With respect to the hindrances in adopting social media for instructional purposes, participant responses were categorized into eight themes. The most commonly cited barriers to using social media for instructional purposes revolved around the theme of facilitating technology. Thirty-one participants stated a qualitative response which fell under this theme. Specifically, the lack of or poor quality of Internet connectivity and technical support prevents these participants from using social media. Other participants mentioned that not all students have the required equipment to use social media, such as smartphones. Participant 67 for example, stated, "It is difficult to use media in teaching without the provision of devices (such as computers, iPad), technical support, and maintenance of devices periodically."

The second theme regarding the barriers toward adopting social media in teaching is lack of time. Twenty-seven participants mentioned that using social media required a considerable amount of time for planning, preparation, implementation, and follow-up. Participant 99, for example, stated, "It will take too much time to reorganize the course to be suitable for using social media tools." Participant 160 stated, "The integration of social

media into teaching will require constant follow-up around the clock." Participant 219 stated, "I do not have enough time to follow up the students through social media; the number of my students exceeds 100 students."

The third theme for not adopting social media for teaching revolves around perceived potential risks. Twenty-five participants perceive there are several potential risks associated with using social media tools in teaching. The possible risks mentioned by respondents include privacy violation, misuse of these tools, inaccurate content, and identity theft. Participant 134, for example, stated, "I feel that I need my privacy to be respected and my image to the students does not exceed the framework of academia." Participant 269 stated, "Social media may be used as a mocking platform to students with each other or to faculty members." Participant 146 stated, "I have concerns about misuse of my teaching material and concerns about misuse of my personal information."

The existence of Blackboard forms the next theme to not adopting social media for instructional purposes. Fourteen participants indicated that they do not need to use social media because the university supports using learning management systems (e.g., Blackboard) and that Blackboard is a formal and safe environment. Participant 232 stated, "At the University, we have an academic platform that supports all the advantages of communication with students, namely Blackboard." Participant 107 stated, "The university provides Blackboard accounts and official emails for each faculty member and students and these two tools are the most professional and efficient ways in dealing with students and colleagues." Participant 134 said, "I realize the importance of incorporating new technologies into education, and I do so! I depend heavily on what Blackboard

offers. I believe that email services and Blackboard make it easier to reach out to students. Why then do I have to use other means of social media to interact with them?"

Ten participants indicated that they do not use social media because there are no policies that define and regulate the integration of social media in teaching. Participant 209 stated, "The use of social media in teaching is a very beautiful idea, but the university must develop policies to use these tools in order to preserve scientific rights and respecting the ethics of dialogue and communication." Participant 269 stated, "In order to use social media properly and securely, laws must be legislated to control the use of these means."

Self-efficacy is another reason that hampers faculty members from using social media for instructional purposes. Eight participants stated that they do not integrate social media in their pedagogy because they lack the skills to properly use these tools. Participant 36 stated, "Lack of familiarity with the proper ways of using these tools in teaching is a reason I do not use social media." Participant 313 stated, "I have simple knowledge about how these tools [social media] might be employed in teaching." In a similar vein, seven participants asserted the importance of providing proper training for faculty members. Their reasons for this training include increasing awareness of the potential benefits of social media in teaching and how to effectively implement social media in teaching. Participant 269 stated, "Faculty members need to conduct training courses in this field [social media] so that the faculty members will be aware of all the pros and cons."

The next theme is related to incompatibility. Seven participants mentioned the incompatibility between teaching styles or the nature of courses they teach and the use of social media. They stated that the incompatibility would cause social media to hamper the ability to effectively teach. Participant 239 stated, "I am teaching mathematics and I think it is so difficult to use social media to teach mathematical concepts." Participant 395 mentioned, "Using social media is not a fit with my teaching style."

Subjective norms also are one of the reasons that prevent faculty members from adopting social media. Six respondents mentioned that their superiors in the university have not given them the permission to use these tools. Participant 248 for example, stated, "I do not use social media in my teaching because of the lack of official permission from the university administration to use social media for the purpose of teaching." Participant 41 stated, "I used social media for a while for the purposes of spreading knowledge and communicating with students, but I have been told by my superiors that these tools are informal and unreliable."

To sum up, these questions provided an opportunity to the participants to describe in more details their perceived benefits and risks about adopting social media in teaching students. This information is useful in answering Research Question 1. According to the respondents, the most commonly perceived benefit of integrating social media in instructions is improving learning processes, whereas the most cited barriers to using social media in teaching is facilitating technology.

Summary

In this chapter, the researcher presented participants' demographic information, screening of the data, reliability and validity of the scores of the instruments, descriptive statistics, t-test results, ANOVA analysis, multiple regression analyses, and open-ended question themes. The multiple regression results indicated that attitude and subjective norms were significant predictors for faculty members' intentions to integrate social media in their pedagogy. However, subjective norm was not a significant factor in predicting faculty members' intention to use social media for instructional purposes. The results of the t-tests 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 and nationality. The ANOVA also shows that there was no significant difference in faculty members' intention to adopt social media for teaching purposes between different academic ranks. However, there was a significant difference in faculty intentions between faculty members who teach in art and education colleges and faculty members who teach in health colleges. Specifically, faculty in the art and education colleges showed significantly more intentions to use social media than those in the health colleges.

Chapter 5: Discussion, Implications, Recommendations, and Conclusions

This chapter presents a complete overview of this study and significant conclusions drawn from the analyzed data presented in Chapter 4. This chapter also discusses the practical implications of this study and provides recommendations for future research.

Summary of the Study

The literature reveals that the adoption of social media in teaching leads to enhanced teaching processes in different ways. Although the use of social media is prevalent globally among college students, the literature suggests that the adoption of these tools among faculty members, particularly in Saudi Arabia, is still under-researched (Alasfor, 2016). Given this problem, the ultimate goal of this research was to better understand factors that could facilitate or impede the intention of adopting social media for instructional purposes at Imam Abdulrahman Bin Faisal University, a university in Saudi Arabia. In order to do so, the current study attempted to identify faculty member perceptions regarding perceived benefits and risks associated with integrating social media in teaching. Also, it examined how faculty members' attitudes, subjective norms, and perceived behavioral control predicted their intentions toward the adoption of social media in teaching.

This study addressed the following questions:

1. What perceived benefits and risks of employing social media for teaching do faculty members at Imam Abdulrahman Bin Faisal University identify?

2. To what extent do attitudes, subjective norms, and perceived behavioral control predict faculty members' intentions to adopt social media at Imam Abdulrahman Bin Faisal University?

3. Do certain demographic variables (gender, nationality, age, academic rank, and colleges) result in statistical differences in faculty members' intentions to adopt social media technologies in their teaching at Imam Abdulrahman Bin Faisal University?

A questionnaire was distributed via email to all faculty members at Imam Abdulrahman Bin Faisal University. The questionnaire was divided into four main sections. The first section obtained demographic information. The second section collected faculty members' perceptions about the benefits and risks of embracing social media for teaching purposes. The third section collected information about faculty member intentions to embrace social media in their teaching practices. The last section was an optional open-ended question which asked faculty members one of two questions. These questions asked faculty members who used social media tools in their teaching to provide reasons that prompted them to use these tools, while faculty members who did not use social media tools for teaching purposes were asked to provide reasons that prevented them from using these tools. The findings of this study indicated that a high percentage of faculty members perceived the potential benefits of social media in enhancing the interaction between student and faculty and among students, as well as the benefit of using social media in sharing course knowledge and contents. Also, critical remarks, privacy, and distraction in the classrooms the most perceived risks associated

with the adoption of social media in teaching. In addition, the results showed that faculty member attitudes and subjective norms had a significant explanatory power on the faculty's adoption intention.

Discussion

        Perceived benefits of employing social media in the classroom. For those who had previously used social media in their teaching, 74.2% of participants indicated that they use instant messaging to supplement their teaching. One possible explanation for this wide spread use of instant messaging among faculty for teaching might be related to their perceptions of the benefits of using instant messaging in teaching. According to responses regarding the perceived benefits of social media, the two most cited benefits were improving the interaction between faculty and students and improving interaction among students (74.7% and 63.3%, respectively). Instant messaging tools are appropriate tools for these two benefits; since instant messaging was the most commonly used tool of social media among faculty members in their daily lives, they were able to perceive its benefit for communication.

        Although using instant messaging in teaching is considered a powerful tool for communication in higher education (Kay & Lauricella, 2013), its potential for improving students learning might be limited if it is continued to be used in the way it is currently used. Indeed, researchers have found that most of the use of social media in academic settings only includes the rudimentary use of social media applications (i.e., communication purposes; Aifan, 2015; Alsurehi & AlYoubi, 2014). This rudimentary utilization of social media in teaching is also mentioned by several participants in the

present study. Outside of this study (and cross-culturally), it seems that others support this view as well. Specifically, only 14% of the faculty members at a large university in the United States in Hartshorne et al. (2010)'s study reported believing that using instant message could improve students' learning.

Despite these concerns, Alsurehi and AlYoubi (2014) recognize that social media is a powerful tool and could be used to more effectively enhance learning. For example, Mbodila et al. (2014) concluded that using Facebook has a positive impact on students' engagement at a South African university. Moreover, Alzahrani (2013) found that using wikis is an effective tool for enhancing undergraduate students' learning and satisfaction in a biology class. Junco et al. (2011) also found that students using Twitter showed more engagement in class and a higher average GPA than their counterparts.

Although many participants recognized the benefits of increased communication as a result of social media in educational settings, only 16.5% of the participants in this study reported that they thought that social media might improve students' writing skills. Further, the results of this study show that blogging and wiki use were the least used tool among social media categories (22.1% and 33.3%, respectively). This is concerning because several empirical studies show that "blogs and wikis support active learning while extending teaching and learning beyond the four walls of the classroom" (Holcomb & Beal, 2010, p. 29). Also, "the most effective asynchronous tools for the promotion of critical thinking are threaded discussions and alternative assignments based on emergent technologies," such as blogs and wikis (Mandernach, 2006, p. 45). Blogs and wikis support student critical thinking and writing when students create their own content,

critically read other students' content, and reflect on other students' blogs (Hojailan, 2013; Mandernach, 2006). Furthermore, Yang and Chang (2012) found that using blogs improves students' peer learning, peer interaction, and motivation to learn from their peers when they read and comment on others' blogs. Blogs and wikis are effective tools that empower students' writing performance in a collaboratively way. According to Sadaf (2013), the majority of preservice teachers in her study perceived the benefit of using of blogs (77 %) and wikis (66 %) in improving student writing skills. Further, Hartshorne et al. (2010) found that blogs (41%) and wikis (29%) were the two most cited Web 2.0 tools that faculty members perceived as having pedagogical value in enhancing student writing. Moreover, using wikis also could improve the quality and the accuracy of students' writing in collaborative environments (Alshumaimeri, 2011; Kuteeva, 2011).

Given the extant evidence which shows the potential benefits of using blogs and wikis in improving learning in students, it is perplexing why more faculty members do not adopt blogs as part of their curriculum. One reason may be that the social media categories that faculty members commonly use in their daily lives are the most likely to be used in teaching their students. On the opposite end, social media applications that faculty members do not use in their non-work lives are less likely to be used for teaching purposes, such as blogs or wikis. Given that participants in this study reported very little use of blogs in their personal lives, this underutilization of blogs in their personal lives may reflect their reluctance to adopt blogs in the classroom. Another reason why instructors may not use blogs in the classroom could be due to the existence of learning management systems within the university (i.e., Blackboard). Alasfor (2016) confirms

that the existence of Blackboard prevents many faculty from adopting social media. This is a thought that resonated with several of the participants in the present study. However, Liu (2010) asserts that "the future technology integration in education should focus on what students use instead of what the school wants them to use to guarantee maximum efficiency" (p. 113). Another final possible explanation for the underutilization of blogs in the classroom could be attributed to faculty members not perceiving the benefits of these tools in teaching as suggested by technology acceptance models (TAM).

Perceived risks of employing social media in the classroom. With respect to faculty's perception of the risks of integrating social media in teaching, the most frequently cited risk was related to students posting insulting or critical remarks of faculty or students on social media. This result is consistent with Lenartz (2012) and Sobaih et al. (2016). Lenartz reported that critical remarks are a complicated issue associated with the adoption of social media, particularly in higher education, as individuals in higher education institutions are given high levels of free speech. Therefore, according to Lenartz, educational institutions have to consider the issue of violating the principle of free speech by balancing between free speech and protecting individuals from online attacks.

Issues of privacy also were considered as a potential risk of adopting social media in teaching. This finding is in agreement with Chen and Bryer's study (2012). Within the context of Saudi Arabia, Aifan (2015) found privacy issues also constituted a major concern for both faculty and students using social media for learning purpose at King

Abdulaziz University. Similarly, Alasfor (2016) also found that faculty members in Saudi universities were concerned about privacy violations.

In addition, one of the most frequently cited risks associated with using social media is the potential for distraction of students. This concern is discussed by Chen and Bryer (2012), who found that faculty believed that social media might have adversely influenced students' performance due to possible distractions. Sobaih et al. (2016) also reported that faculty members are doubtful that social media could improve students' learning. They believe that these tools are sources of distraction because they were originally designed for recreational purposes. Moreover, according to faculty members' qualitative responses to the question about perceived social media risks, some faculty members reported that using social media could easily distract students due to receiving large numbers of notifications from friends and applications.

Further, some faculty reported that using social media might be involved with posting illegal or inappropriate content. Aifan (2015) found that some social media content might contradict Islamic religion. Some faculty members stated that one reason preventing them from adopting social media in their teaching is because some students have negative attitudes toward the possibility of inappropriate content (e.g., music, women with inappropriate dress, inappropriate ads, etc.) that conflict with their religious values. Moreover, some faculty provided some qualitative responses about the possible risks associated with the integration of social media in teaching. Participants were concerned about students posting inappropriate content that might conflict with Saudi religion or culture. In addition to the inappropriate content, some of the faculty were

concerned about confidentiality of materials, suggesting that students might share the class materials on other social media platforms. Several studies have found that confidentiality is considered a major risk that associated with using social media (Alsadoon, 2013; Lenartz, 2013).

The least frequently cited risks of social media in teaching were online threats, cyberbullying, and the sharing of protected information, respectively. According to Molluzzo and Lawler (2014) "cyberbullying is considered an issue more often in high schools than in colleges and universities" (p. 47). In Saudi Arabia, according to Al-Zahrani (2015), college students avoid cyberbullying, so this may be why faculty members did not perceive cyberbullying as a serious issue.

Discussion of the 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' attitude 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 faculty member respondents' attitudes about the worth of adopting social media positively impacted their intention. This finding is consistent with prior studies that found 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). Hartshorne et al. (2010) found 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 Decomposed Theory of Planned Behavior's (DTPB) 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 Jeng and Hung'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 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 in regard to 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 finding 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 computers labs. Furthermore, faculty and students have access to a large number of 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 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 the items used to capture this construct was minimal (i.e., three). Increasing the number of the items in the scale could lead to a higher alpha. Alternatively, excluding items that contribute to low internal consistency could raise the Cronbach alpha and, in turn, could better capture the perceived behavioral control construct.

Attitude's antecedents. In this study, attitude was composed of three factors. These were 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 (2012) study's ease of use construct being unreliable because the Cronbach alpha was too low ($\alpha = 0.47$).

These results indicate that faculty members' attitudes toward integrating social media tools into teaching is related to their perception about the pedagogical values and 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 integration of 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 suggest 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, including 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 to 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 with several prior studies (Al-Taamneh, 2011; Dermentzi et al., 2016; Hartshorne et al., 2010; Paver, 2012; Sadaf, 2013) and consistent with Taylor and Todd (1995). Faculty members believe that in order to have control over the adoption of social media, they have to 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, 1995). 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.

Discussion of 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 was neither affected by gender nor by age. This result is consistent with several other studies (Aladwani, 2011; Alasfor, 2016; Alsadoon, 2013). With respect to faculty nationality, there was also no significant difference between Saudi faculty and non-Saudi faculty in their intentions toward integration social media into teaching. As far as 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 Art and Education colleges in favor of the latter. To identify the reasons behind this result, the researcher 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 Art 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 Art and Education colleges in items 29, 31, and 32 in favor of faculty members in the Art and Education colleges. Faculty members in the Art and Education colleges felt more comfortable regarding the adoption of social media, received more technical support, and

received more training than their counterparts in Health colleges in regards to adopting social media.

Implications and Recommendations for Enhancing Faculty Members' Intentions for Adopting Social Media for Teaching

The present study has several theoretical implications. The result of this study suggests that DTPB is an adequate framework for predicting faculty members' intentions at Imam Abdulrahman Bin Faisal University 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. These two constructs were not significant in predicting intentions to adopt social media for educational purposes. Therefore, this finding provides partial support for the DTPB framework. 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. Another way in which this study contributes to enriching the relevant literature is that this study quantitatively investigated the problem while most research in this field has tended to follow the qualitative method (Dermentzi et al., 2016).

The results of this study also have several practical implications. First, based on the finding of this study, faculty members do not perceive the full potentials of using social media in teaching. For example, while previous research suggests that blogging

may enhance students' writing skills (Alshumaimeri, 2011; Kuteeva, 2011), this idea was only realized by a small number of participants, and the majority of the respondents indicated that the primary benefit of using social media in teaching was to increase interaction between individuals in the class. Given that research suggests social media may increase several aspects of learning and engagement in the classroom, policy makers should increase faculty awareness about the potential benefits of using social media for educational purposes.

The results of this study suggest that faculty members are aware of the potential risks that are associated with using these tools in teaching (e.g., critical remarks, infringement on privacy, and distractions in class) and voice concerns about not having official university policies surrounding social media. Aifan (2015) recommends that educational institutions can help their faculty to adopt social media in their teaching by offering the necessary resources. Establishing policies regarding social media use can have several advantages. First, such policies may decrease the level of concern that faculty members might have, increasing the adoption of social media. Second, the adoption of policies in social media use may provide additional support for the DTPB framework. Specifically, having a policy on factors that may increase faculty member's perceptions of control in the use of social media may also increase their intention to adopt social media for educational purposes. Some policies universities might incorporate are outlining how social media should be used in the classroom, punishments for misuse, and providing guidelines on how to separate the social media used for personal purposes from educational purposes.

In this study, the lack of an organization-wide policy is also considered a barrier to the adoption of social media use in teaching, along with implications for how using social media will impact instructional time (Taylor & Todd, 1995). Indeed, many participants noted their concerns regarding how time-consuming they anticipated the adoption of social media into the classroom might be. In order to alleviate concerns about time, the university might reduce faculty teaching loads or provide financial incentives for faculty who employ these technologies in their teaching (Alasfor, 2016). Alasfor (2016) stated that "it is not reasonable to expect instructors to use their own time and resources to learn about new technologies and integrate them" (p. 29).

Another practical implementation of this study, according to Taylor and Todd (1995) is that the DTPB model "provide[s] the best guidance for managerial intervention" (p. 151). By using the DTPB model, the result helps to identify factors that could obstruct or stimulate the introduction of innovative technology into teaching practice (i.e., attitude and subjective norms). The results of this present study then provide specific guidance to the individuals at Imam Abdulrahman Bin Faisal University who are responsible for implementing technology initiatives. Specifically, the result of this study should help professional development developers to 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 affect faculty member attitudes at Imam Abdulrahman Bin Faisal University, with subjective norms as a lesser and second significant element. Faculty members at Imam Abdulrahman Bin Faisal University build their decisions to integrate or

not to integrate social media in 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 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 which 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 Imam Abdulrahman Bin Faisal University 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 a positive dialogue between faculty, students, and superiors about integrating social media usage in learning.

Finally, faculty members who belong to Health colleges showed the lowest level of intention toward adoption of social media in their teaching. Those in the Health colleges may have shown less intention due to low levels of self-efficacy, not perceiving enough training, or inadequate technological infrastructure. As such, offering professional developments and training for faculty member on how to successfully utilize social media as instructional tools will develop their competence in utilizing social media. As a result, faculty members' perceived behavioral control and intention to use social media in their future teaching will increase.

Limitations

This study is attributed to having some constructs that were measured by only a few items (e.g., two or three items). The present study did not utilize a large number of items for these constructs because most of the constructs' items used in the study's instruments were adapted from other empirical studies. Correspondence with the authors of the empirical studies from which these scales were adapted revealed that the reason for the short scales (i.e., one, two, or three items to represent the DTPB construct) was due to reducing the study's load on participants. However, using an inadequate number of items to represent constructs in order to reduce the burden on participants may influence the validity and reliability of the scale. For instance, using too brief a questionnaire incurs a risk that the questionnaire items will not clearly express the intended construct. That will affect measurement reliability and, in turn, its precision and validity (Al-Qataee, 2012). With that said, the data analyses in the present study incorporated factor analyses on each of the scales to ensure that satisfactory reliability and validity standards were met.

Another limitation of this study is that it focused only on faculty intentions to adopt social media and did not measure the actual behavior. DTPB framework suggests that intention is a primary predictor of the actual behaviors. While intentions account for a significant proportion of variance in behavior, it does not account for 100% of the variance. This means that intentions are not perfect in predicting behavior. By not having the behavioral outcome, the results of this study cannot say for certain that faculty members at Imam Abdulrahman Bin Faisal University will or will not use social media in their teaching as a result of certain factors. The result of this study is limited to the faculty members' intentions, without measuring the actual usage of social media. Therefore, it might be interesting for further researchers to observe and measure the actual usage of social media among the faculty members.

A final limitation of the present study was caused by a technical problem. Several emails were received from participants saying that the survey link was not working or that after accessing the link and starting, they could not complete the survey because of a technical problem. The researcher followed up with these received emails. However, the same problem may have happened with other faculty members who did not email the researcher and therefore decided to not participate in this study. As a result, some faculty members may have lost their opportunity to participate in this study.

Recommendations for Further Study

The following suggestions are recommendations for future research. Future studies might replicate this study in other Saudi universities to examine the robustness of the DTPB framework. Also, future studies should use several items to measure each

construct in order to acquire more reliable results. This study adopted a questionnaire from other studies that used two or three items to represent each construct in the DTPB framework. Therefore, some constructs might not be expressed clearly because they might have an inadequate number of items. As a result, the reliability of the construct might be under the minimally acceptable levels, as in the cases for the facilitating resources and perceived behavioral control constructs.

After establishing a survey that has several items to measure each construct, the researcher recommends using Structural Equation Modeling (SEM) techniques in order to investigate the complex relationships among constructs and to better understand the effect of decomposed factors in DTPB framework on behavioral intentions.

Also, this study identified faculty members' intentions toward the use of social media at Imam Abdulrahman Bin Faisal University. It researched social media in general, without focusing on a specific social media tool. As such, the researcher recommends future research to focus on specific individual social media tools and study how faculty members perceive these tools' potential in enhancing teaching. According to Capo and Orellana (2011), there are many different technological tools that fall under the definition of Web 2.0; however, these tools differ in their strength in improving student learning in classrooms. So, faculty members might have different attitudes regarding different social media tools. Therefore, it is possible that the influential factors that enable or hinder the use of social media differ based on the social media types.

Finally, Alsurehi and AlYoubi (2014) state that while social media is often used by students, these tools are rarely used as collaborative and educational tools. Indeed,

Alsurehi and AlYoubi (2014) found that while using social media applications can enhance learning, these tools are often not used that way. The researcher urges future researchers to qualitatively study how faculty members who use social media integrate social media in their teaching. Some questions future research might examine are: Do instructors effectively use social media in their teaching? Do they use social media to enhance student learning and higher order thinking, or do they just use them for announcements? Does using social media add value to students learning?

Conclusion

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 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. This study examined faculty members' awareness of the benefits and the risks associated with using social media in teaching at Imam Abdulrahman Bin Faisal University, as well as identifying factors that obstruct or stimulate the implementation of social media for teaching among faculty. The findings of this study indicated that a high percentage of faculty members perceived the potential benefits of social media in enhancing the interaction between student and faculty and among students, as well as the benefit of using social media in sharing course knowledge and contents. However, few faculty perceived the benefit of social media in improving students writing. As far as the risks of integrating social media

in teaching are concerned, critical remarks, privacy, and distraction in classroom were the most perceived risks among faculty members. With respect to the factors contributing to faculty's integration intention of social media, faculty members' attitude and subjective norm were the main drivers for their intention to use social media in their teaching. However, perceived behavioral control did not affect faculty members' use intentions to employ social media for teaching purposes.

In conclusion, the researcher hopes 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 policy makers and administrators at Imam Abdulrahman Bin Faisal University to 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, policy makers 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.

References

Abdi, H. (2003). Factor rotations in factor analyses. *Encyclopedia for Research Methods for the Social Sciences* (pp. 792-795)*. Thousand Oaks, CA: Sage.

Ahmad, P., Hussain, A., & Aqil, M. (2013). Use of web 2.0 in Saudi Arabia Universities. *International Journal of Information Dissemination and Technology, 3*(3), 158-166.

Aifan, H. A. (2015). *Saudi students' attitudes toward using social media to support learning* (Order No. 3713504). Available from ProQuest Dissertations & Theses Global. (1708664409). Retrieved from https://search.proquest.com/docview/1708664409?accountid=142908

Aizen, I. (2002). Icek Aizen: Theory of planned behavior. Retrieved February 5, 2017, from http://people.umass.edu/aizen/tpb.html

Ajjan, H., & Hartshorne, R. (2008). Investigating Faculty Decisions to Adopt Web 2.0 Technologies: Theory and empirical tests. *The Internet and higher education*, *11*(2), 71-80.

Ajjan, H., Hartshorne, R., & Ferdig, R. E. (2010). Student and Faculty Use and Perceptions of Web 2.0 Technologies in Higher Education. In *Web-Based Education: Concepts, Methodologies, Tools and Applications* (pp. 1162-1181). Hershey, PA: IGI Global. doi:10.4018/978-1-61520-963-7.ch079

Ajzan, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice Hall.

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, *50*(2), 179-211.

Ajzen, I. (2005). *Attitudes, personality, and behavior*. McGraw-Hill Education (UK).

Al-Daraiseh, A. A., Al-Joudi, A. S., Al-Gahtani, H. B., & Al-Qahtani, M. S. (2014). Social Networks‟ Benefits, Privacy, and Identity Theft: KSA Case Study. *Soc. Networks*, *5*(12), 129-143.

Al-Gahtani, S. S., Hubona, G. S., & Wang, J. (2007). Information technology (IT) in Saudi Arabia: Culture and the acceptance and use of IT. *Information & Management*, *44*(8), 681-691.

Al-Ghaith, W. A. (2016). Applying Decomposed Theory of Planned Behaviour towards a Comprehensive Understanding of Social Network Usage in Saudi Arabia. *International Journal of Information Technology and Computer Science (IJITCS)*, *8*(5), 52-61.

Al-Khalifa, H. S., & Garcia, R. A. (2013). The state of social media in Saudi Arabia's higher education. *International Journal of Technology and Educational Marketing (IJTEM)*, *3*(1), 65-76.

Al-Otaibi, Y. D., & Houghton, L. (2016). Factors affecting the adoption of Web 2.0 technologies by university students: Evidence from Australia. *Handbook of Research on Learning Outcomes and Opportunities in the Digital Age* (pp. 27-50). doi:10.4018/978-1-4666-9577-1.ch002

AL-Qataee. A*. (2012) Test length and precision: How precise the GAT will be if the test is shortened?. The National Center for Assessment in Higher Education. Retrieved from http://www.qiyas.sa/MAndAssesment/Pages/Researches.aspx*

Al-Shehri, A. (2011). Connectivism: A new pathway for theorising and promoting mobile language learning. *International Journal of Innovation and Leadership in the Teaching of Humanities, 1* (2): 10-31.

Al-Taamneh, R. (2011). *An empirical and theoretical investigation of the factors influencing newfoundland and labrador's post-secondary instructors' decisions to adopt web 2.0 technologies* (Master's thesis*).* Retrieved from ProQuest Dissertations & Theses database. (UMI No. 917948955)

Al-Zahrani, A. M. (2015). Cyberbullying among Saudi's higher-education students: implications for educators and policymakers. *World Journal of Education*, *5*(3), 15-26.

Aladwani, A. (2011). Analyzing the role of some personal determinates in Web 2.0applications usage. Issues in Information System 12(1). 483-488.

Alamri, J. (2016). *The perception of interpersonal relations between instructors and students as experienced within classroom and online communication: a mixed method case study of undergraduate women in a Saudi institution* (Unpublished doctoral dissertation). University of Nottingham. Retrieved November 21, 2107, from http://eprints.nottingham.ac.uk/id/eprint/37604

Alasfor, K. (2016). *Social media adoption among university instructors in Saudi Arabia* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 1456443)

Alebaikan, R. A. (2010). *Perceptions of blended learning in Saudi universities* (Doctoral dissertation)*.* University of Exeter. United Kingdom.

Alkhalifah, A. A. (2014). Ethics of Computing: A Suggested Course Model for GCC Countries. In *The Third International Conference on E-Learning and E-Technologies in Education (ICEEE2014)* (pp. 161-172). The Society of Digital Information and Wireless Communication.

Almadhoun, N. M., Dominic, P. D. D., & Lai, F. W. (2014). Investigation of perceived security, privacy and trust on social networking sites for stakeholder relationships development in Malaysian universities. *International Journal of Business Information Systems*, *15*(1), 1–21. doi:10.1504/ijbis.2014.057962

Almeida, F. (2012). Web 2.0 technologies and social networking security fears in enterprises. *International Journal of Advanced Computer Science and Applications*, *3*(2), 152–156. doi:10.14569/IJACSA.2012.030226

Almeshal, T. (2013). *Social media adoption in learning and teaching by higher education faculty* (Unpublished master's thesis). University of Reading, Reading, Berkshire, United Kingdom.

Alqahtani, F., Watson, J., & Partridge, H. (2010). *Users' adoption of Web 2.0 for knowledge* management: Position paper. Cape Town, South Africa: Academic Conferences Ltd.

Alqahtani, S. (2016). Effects of Social Networking on Higher Education in Saudi Arabia. In T. Issa, P. Isaias, & P. Kommers (Eds.), *Social Networking and Education: Global Perspectives* (pp. 291-304). Springer International Publishing Switzerland: Springer International Publishing.

Alrayes, A. M., & Ali, H. M. (2016). Web 2.0 in higher education: The instructors' acceptance in higher educational institutes in Kingdom of Bahrain. *World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, *10*(3), 835-840.

Alsadoon, E. A. (2013). *Factors influencing faculty to adopt Web applications in their teaching* (Unpublished doctoral dissertation). Ohio University, Athens, OH.

AlSagri, H. S., & AlAboodi, S. S. (2015, June). Privacy awareness of online social networking in Saudi Arabia. In *Cyber Situational Awareness, Data Analytics and Assessment (CyberSA), 2015 International Conference on* (pp. 1-6). IEEE.

Alsharani, M. (2016, January 7). تطلق للتعليم معلم الجبيل . *Alwatan Online.* Retrieved from http://www.alwatan.com.sa/Local/News_Detail.aspx?ArticleID=248355&CategoryID=5

Alshumaimeri, Y. (2011). The effects of wikis on foreign language students writing performance. *Procedia-Social and Behavioral Sciences*, *28*(1), 755-763.

Alsurehi, H., & Al Youbi, A. (2014). Towards applying social networking in higher education. *International Journal of Academic Research, 6*(5), 221-229.

Alwagait, E., Shahzad, B., & Alim, S. (2015). Impact of social media usage on students' academic performance in Saudi Arabia. *Computers in Human Behavior*, *51*, 1092-1097.

An, Y. J., & Reigeluth, C. (2011). Creating technology-enhanced, learner-centered classrooms: K–12 teachers' beliefs, perceptions, barriers, and support needs. *Journal of Digital Learning in Teacher Education*, *28*(2), 54-62.

Anderson, P. (2007). *What is Web 2.0? Ideas, technologies and implications for education:* Joint Information Systems Committee (JISC). Retrieved January 31, 2017 from http://www.jisc.ac.uk/media/documents/techwatch/tsw0701b.pdf

Applefield, J. M., Huber, R., & Moallem, M. (2000). Constructivism in theory and practice: Toward a better understanding. *The High School Journal*, *84*(2), 35-53.

Asgari, M., & Kaufman, D. (2008). Motivation, learning, and game design. In R.E. Ferdig (Ed.), *Handbook of research on effective electronic gaming in education.* Hershey, PA: Information Science Reference.

Askool, S. S. (2012, April). The use of social media in Arab Countries: a case of Saudi Arabia. In *International Conference on Web Information Systems and Technologies* (pp. 201-219). Springer Berlin Heidelberg.

Bagozzi, R. P. (1981). Attitudes, intentions, and behavior: A test of some key hypotheses. *Journal of Personality and Social Psychology*, *41*(4), 607–627. doi:10.1037//0022-3514.41.4.607

Barnes, N. D., & Barnes, F. R. (2009). Equipping your organization for the social networking game. *Information Management Journal*, *43*(6), 28-33.

Begum, M. (2012). Education and Development: The Backbone of a Nation. *Apollon Undergraduate Ejournal*. Retrieved from http://www.apollonejournal.org/apollon-journal/education-and-development-the-backbone-of-a-nation

Bennett, S., Maton, K., & Kervin, L. (2008). The 'digital natives' debate: A critical review of the evidence. *British journal of educational technology*, *39*(5), 775-786.

Bhattacharjee, J. (2015). Constructivist Approach to Learning–An Effective Approach of Teaching Learning. *Int. Res. J. Interdiscipl. Multidiscipl. Stud*, *1*(4), 65-74.

Blake, R. H., & Kyper, E. S. (2013). An investigation of the intention to share media files over peer-to-peer networks. *Behaviour & Information Technology*, *32*(4), 410-422.

Bovaird, J. A. (2010). Testing and Measurement. In *Encyclopedia of Cross-Cultural School Psychology* (pp. 981-984). Springer US.

Browne, M. W. (2001). An overview of analytic rotation in exploratory factor analysis. *Multivariate Behavioral Research*, *36*(1), 111-150.

Campbell, S., Chong, S., Ewen, V., Toombs, E., Tzalazidis, R., & Maranzan, K. A. (2016). Social media policy for graduate students: Challenges and opportunities for professional psychology training programs. *Canadian Psychology/Psychologie canadienne*, *57*(3), 202-210.

Cao, Y., & Hong, P. (2011). Antecedents and consequences of social media utilization in college teaching: A proposed model with mixed-methods investigation. *On the Horizon, 19*(4), 297–306. doi:10.1108/10748121111179420

Cao, Y., Smith, Y., & Hong, P. (2013). Social media: Fad or tool? What motivates college faculty to utilize Web 2.0 and 3.0 technologies in the classroom? *International Journal of Innovation in Education*, *2*(1), 1-32. doi:10.1504/ijiie.2013.057225

Capo, B. H., & Orellana, A. (2011). Web 2.0 technologies for classroom instruction: high school teachers' perceptions and adoption factors. *Quarterly Review of Distance Education*, *12*(4), 235.

Chaurasia, M.A. (2011). Comparative study in adoption of Web 2.0 technologies between Western and Arab universities. *Journal of Computing, 3*(2), 175-179.

Chen, B., & Bryer, T. (2012). Investigating instructional strategies for using social media in formal and informal learning. *The International Review of Research in Open and Distributed Learning*, *13*(1), 87-104.

Clarke, I., & Flaherty, T. B. (2010). Social media strategies for the academic. In C. Wankel, M. Marovich, & J. Stanaityte (Eds.), *Cutting-edge Social Media Approaches to Business Education: Teaching with LinkedIn, Facebook, Twitter, Second Life, and Blogs*, (pp.269-287) Charlotte, North Carolina: Information Age Publishing.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education*. London:

Cole, M. (2009). Using Wiki technology to support student engagement: Lessons from the trenches. *Computers & education*, *52*(1), 141-146.

Communications and Information Technology Commission (2007). The Anti-Cyber

    Crime Law[pdf]. Retrieved from http://

    http://www.citc.gov.sa/en/RulesandSystems/CITCSystem/Documents/LA_004_%

    20E_%20Anti-Cyber%20Crime%20Law.pdf

Corrocher, N. (2011). The adoption of Web 2.0 services: An empirical

    investigation. *Technological Forecasting and Social Change*, *78*(4), 547–558.

    doi:10.1016/j.techfore.2010.10.006

Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis:

    Four recommendations for getting the most from your analysis. *Practical*

    Assessment Research &Evaluation, 10(7), 1-9.

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods*

    approaches. Thousand Oaks, CA: Sage.

Creswell, J. W. (2015). *Educational research: Planning, conducting, and evaluating*

    quantitative. Upper Saddle River, NJ: Pearson.

Dabbagh, N., & Reo, R. (2011). Impact of Web 2.0 on higher education. In D.W. Surry,

    T. Stefurak, R. Gray (Eds.), *Technology integration in higher education: Social*

    and organizational aspects. (pp. 174–187). Hershey, PA: IGI Global.

Daher, T., & Lazarevic, B. (2014). Emerging instructional technologies: Exploring the

    extent of faculty use of Web 2.0 tools at a midwestern community

    college. *TechTrends*, *58*(6), 42–50. doi:10.1007/s11528-014-0802-1

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of

    information technology. *MIS Quarterly*, *13*(3), 319–340. doi:10.2307/249008

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management science*, *35*(8), 982-1003.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology*, *22*(14), 1111-1132.

Delello, J. A., McWhorter, R. R., & Camp, K. (2015). Using Social Media as a Tool for Learning: A Multi-Disciplinary Study. *International Journal on E-Learning*, *14*(2), 163-180.

Dermentzi, E., Papagiannidis, S., Osorio Toro, C., & Yannopoulou, N. (2016). Academic engagement: Differences between intention to adopt social networking sites and other online technologies. *Computers in Human Behavior*, *61*, 321–332. doi:10.1016/j.chb.2016.03.019

DeVellis, R. F. (2012). *Scale development: Theory and applications*. Newbury Park, CA: Sage.

Dinev, T., Hart, P. (2003). *Privacy concerns and internet use - A model of trade-off factors,* Paper presented at the Academy of Management Conference, Seattle, USA. Retrieved from http://proceedings.aom.org/content/2003/1/D1.6.short

Dougherty, K. (2015). *Understanding factors that influence college faculty in deciding to adopt digital technologies in their practice* (Master's thesis). Available from ProQuest Dissertations & Theses database. (UMI No.1643604501)

Ducharme, D. (2014). Survey response categories: Guide for using neutral or N/A options. *United States Naval War College War Gaming*. Retrieved from https://www.usnwc.edu/getattachment/Research---Gaming/War-Gaming/Documents/Publications/Articles/Survey-Response-Categories.pdf.aspx

Dwyer, C., Hiltz, S., & Passerini, K. (2007). Trust and privacy concern within social networking sites: A comparison of Facebook and MySpace. *Proceedings of AMCIS 2007,* Keystone, CO. Retrieved February 14, 2017 from http://csis.pace.edu/~dwyer/research/DwyerAMCIS2007.pdf

Ebner, M., Lienhardt, C., Rohs, M., & Meyer, I. (2010). Microblogs in Higher Education–A chance to facilitate informal and process-oriented learning?. *Computers & Education*, *55*(1), 92-100.

Echeng, R., & Usoro, A. (2014). Acceptance factors and current level of use of Web 2.0 technologies for learning in higher education: A case study of two countries. *International Journal of Advanced Computer Science and Applications,* *5*(5), 9-14. doi:10.14569/ijacsa.2014.050502

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends:" Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, *12*(4), 1143-1168.

Ennew, C. T., & Fernandez-Young, A. (2006). Weapons of mass instruction? The rhetoric and reality of online learning. *Marketing Intelligence & Planning*, *24*(2), 148–157. doi:10.1108/02634500610654008

Erdem, M., & Kibar, P. N. (2014). Students' opinions on facebook supported blended learning environment. *TOJET: The Turkish Online Journal of Educational Technology*, *13*(1).

Erumban, A. A., & De Jong, S. B. (2006). Cross-country differences in ICT adoption: A consequence of Culture?. *Journal of World Business*, *41*(4), 302-314.

Ethier, J. (2006). Current research in social network theory. *Social Network Theory*. Retrieved from https://www.scribd.com/document/11171859/Current-Research-in-Social-Network-Theory

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological methods*, *4*(3), 272.

Featherman, M. S., & Pavlou, P. A. (2003). Predicting e-services adoption: A perceived risk facets perspective. *International Journal of Human-Computer Studies*, *59*(4), 451–474. doi:10.1016/s1071-5819(03)00111-3

Field, A. (2009). *Discovering statistic using SPSS* (3rd ed.). Thousand Oaks, CA: Sage

Fishbein, M., & Ajzen, I. (1975). Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading*, MA: Addison-Wesley.

Fishbein, M., & Ajzen, I. (2011). *Predicting and changing behavior: The reasoned action approach*. London, UK: Taylor & Francis.

Francis, J. J., Eccles, M. P., Johnston, M., Walker, A., Grimshaw, J., Foy, R., . . . Bunetti, D. (2004). *Constructing questionnaires based on the theory of planned behavior: A manual for health services researchers.* Newcastle upon Tyne, UK: Centre for Health Services Research, University of Newcastle upon Tyne.

Galante, A. T. (2015). *Social media use in classroom teaching: A facet-based discourse analysis of key factors influencing pedagogy* (Order No. 10179056). Available from ProQuest Dissertations & Theses Global. (1841904529). Retrieved from https://search.proquest.com/docview/1841904529?accountid=142908

Garland, R. (1991). The mid-point on a rating scale: Is it desirable. *Marketing bulletin*, *2*(1), 66-70.

Gefen, D. (2003). TAM or just plain habit. *Journal of Organizational and End User Computing*, *15*(3), 1–13. doi:10.4018/joeuc.2003070101

Global Media Insight. (2016, May 25). Saudi Arabia Social Media Statistics 2016. Retrieved April 10, 2017, from http://www.globalmediainsight.com/blog/saudi-arabia-social-media-statistics/

Go-Gulf. (2016, January 18). Social Media in Saudi Arabia - Statistics and Trends. Retrieved from http://www.go-gulf.com/blog/social-media-saudi-arabia/

GreGory, P., GreGory, K., & Eddy, E. (2014). The instructional network: using Facebook to enhance undergraduate mathematics instruction. *Journal of Computers in Mathematics and Science Teaching*, *33*(1), 5-26.

Gribbins, M. L., Hadidi, R., Urbaczewski, A., & Vician, C. (2007). Technology-enhanced learning in blended learning environments: A report on standard practices. Technology, 11, 30-2007.

Gupta, A., & Dhami, A. (2015). Measuring the impact of security, trust and privacy in information sharing: A study on social networking sites. *Journal of Direct Data and Digital Marketing Practice*, *17*(1), 43–53. doi:10.1057/dddmp.2015.32

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis.* New Jersey, The United States: Pearson Prentice Hall.

Hargittai, E. (2007). Whose space? Differences among users and non-users of social network sites. *Journal of Computer-Mediated Communication*, *13*(1), 276–297. doi:10.1111/j.1083-6101.2007.00396.x

Harsono, I.L.D., & Suryana, L.A. (2014) Factors affecting the use bahviour of social media using UTAUT2 model. *Proceedings of the First Asia-Pacific Conference on Global Business, Economics, Finance, and Social Sciences, Singapore, 1-3 August 2014*.

Hartshorne, R., Ajjan, H., & Ferdig, R. E. (2010). Faculty use and perceptions of Web 2.0 in higher education. In H. Yang, & S. Yuen (Eds.), H*andbook of Research on Practices and Outcomes in E-Learning: Issues and Trends* (pp. 241-259). Hershey, PA: IGI Publishing.

Henson, R. K., & Roberts, J. K. (2006). Use of exploratory factor analysis in published research: Common errors and some comment on improved practice. *Educational and Psychological measurement*, *66*(3), 393-416.

Hinton, P., Brownlow, C., & McMurray, I. (2004). *SPSS explained*. Routledge.

Hofstede (n.d.), G. What about Saudi Arabia? Retrieved February 12, 2017, from GEERT HOFSTEDE, https://geert-hofstede.com/saudi-arabia.html

Hofstede, G. H., & Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Sage.

Hofstede, G., & Hofstede, G. J. (2005). Cultures and organizations: Software of the mind, 2nd ed. NY: McGraw-Hill.

Hogarty, K. Y., Hines, C. V., Kromrey, J. D., Ferron, J. M., & Mumford, K. R. (2005). The quality of factor solutions in exploratory factor analysis: The influence of sample size, communality, and overdetermination. *Educational and Psychological Measurement*, *65*(2), 202-226.

Hojailan, M. I. (2013). *The effectiveness of the social network in higher education in Saudi Arabia: action research to develop an elearning conceptual model based on blog tools* (Unpublished doctoral dissertation). De Montfort University. United Kingdom.

Holcomb, L. B., & Beal, C. M. (2010). Capitalizing on web 2.0 in the social studies context. *TechTrends, 54*(4), 28-32. Retrieved from https://search-proquest-com.sdl.idm.oclc.org/docview/744366980?accountid=142908

Holder-Ellis, M. (2015). *The role of social media technology tools in higher education instruction* (Doctoral Dissertation). Retrieved from ProQuest Dissertations and Theses database. (UMI No.1734046205)

Huang, W.-H. D., Hood, D. W., & Yoo, S. J. (2013). Gender divide and acceptance of collaborative Web 2.0 applications for learning in higher education. *The Internet and Higher Education*, *16*, 57–65. doi:10.1016/j.iheduc.2012.02.001

Hung, W. C., & Jeng, I. (2013). Factors influencing future educational technologists' intentions to participate in online teaching. *British Journal of Educational Technology*, *44*(2), 255-272.

Hur, J. W., & Oh, J. (2012). Learning, engagement, and technology: Middle school students' three-year experience in pervasive technology environments in South Korea. *Journal of Educational Computing Research*, *46*(3), 295-312.

Hurt, N. E., Moss, G. S., Bradley, C. L., Larson, L. R., Lovelace, M., Prevost, L. B., ... & Camus, M. S. (2012). The 'Facebook'effect: college students' perceptions of online discussions in the age of social networking. *International Journal for the Scholarship of Teaching and Learning*, *6*(2), 10.

Jairak, R., Sahakhunchai, N., Jairak, K., & Praneetpolgrang, P. (2010). Factors affecting intention to use in social networking sites: An empirical study on Thai society. *Communications in Computer and Information Science*, *114*(1), 43-52. doi:10.1007/978-3-642-16699-0_6

Johnson, B., & Christensen, L. (2008). *Educational research: Quantitative, qualitative, and mixed approaches*. Thousand Oaks, CA: Sage.

Jones, M. G., & Brader-Araje, L. (2002). The impact of constructivism on education: Language, discourse, and meaning. *American Communication Journal*, *5*(3), 1-10.

Junco, R., Heiberger, G., & Loken, E. (2011). The effect of Twitter on college student engagement and grades. *Journal of computer assisted learning*,*27*(2), 119-132.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons, 53*(1), 59–68.

Kay, R., & Lauricella, S. (2013). Exploring the use of text and instant messaging in higher education classrooms. *Research in Learning Technology*, *21*(1).

Kelm, O. R. (2011). Social media: It's what students do. *Business Communication Quarterly, 74(*4), 505-520.

Koh, E., Kin, Y. G., Wadhwa, B., & Lim, J. (2012). Teacher perceptions of games in Singapore schools. *Simulation & Gaming*, *43*(1), 51-66.

Kuh, G. D. (2001). Assessing what really matters to student learning inside the national survey of student engagement. *Change: The Magazine of Higher Learning*, *33*(3), 10-17.

Kuteeva, M. (2011). Wikis and academic writing: Changing the writer–reader relationship. *English for Specific Purposes*, *30*(1), 44-57.

Laird, T., & Kuh, G. (2005). Student experiences with information technology and their relationship to other aspects of student engagement. *Research in Higher Education*, *46*(2), 211-233.

Lee, J., Cerreto, F. A., & Lee, J. (2010). Theory of Planned Behavior and Teachers' Decisions Regarding Use of Educational Technology. Educational Technology & Society, 13 (1), 152–164.

Lee, M. C. (2009). Factors influencing the adoption of internet banking: An integration of

    TAM and TPB with perceived risk and perceived benefit. *Electronic Commerce*

    Research and Applications, *8*(3), 130–141. doi:10.1016/j.elerap.2008.11.006

Lenartz, A. J. (2012). *All my rowdy 'friends': The use of social media in higher*

    education (Order No. 3509820). Available from ProQuest Dissertations & Theses

    Global. (1019989172). Retrieved from

    https://search.proquest.com/docview/1019989172?accountid=142908

Lewis, C. C., Fretwell, C. E., Ryan, J., & Parham, J. B. (2013). Faculty use of established

    and emerging technologies in higher education: A unified theory of acceptance

    and use of technology perspective. *International Journal of Higher*

    Education, *2*(2). doi:10.5430/ijhe.v2n2p22

Lewis, J. D., & Weigert, A. (1985). Trust as a social reality. *Social Forces*, *63*(4), 967-

    985. doi:10.2307/2578601

Li, L., & Pitts, J. (2009). Does it really matter? Using virtual office hours to enhance

    studentfaculty interaction. Journal of Information Systems Education, 20(2), 175-

    185. Retrieved from

    http://web.ebscohost.com.library.capella.edu/ehost/pdfviewer/pdfviewer?sid=968

    98cf9-cba4-4a66-9263-16a65da64f4b%40sessionmgr14&vid=13&hid=22

Lin, H. (2007). Predicting consumer intentions to shop online: An empirical test of

    competing theories. *Electronic Commerce Research and Applications*, *6*(4), 433–

    442. doi:10.1016/j.elerap.2007.02.002

Lin, S.W., & Liu, Y.C. (2012). The effects of motivations, trust, and privacy concern in social networking. *Service Business*, *6*(4), 411–424. doi:10.1007/s11628-012-0158-6

Lin, T. T., Chiu, V. C., & Lim, W. (2011). Factors affecting the adoption of social network sites: Examining four adopter categories of Singapore's working adults. *Asian Journal of Communication*, *21*(3), 221–242. doi:10.1080/01292986.2011.559256

Lindbeck, R., & Fodrey, B. (2011). Integrating technology into the college classroom: Current practices and future opportunities. *National Social Science Association, 1*(5). Retrieved from http://www.nssa.us/tech_journal/volume_1-1/vol1-1_article5.html

Liu, Y. (2010). Social media tools as a learning resource. *Journal of Educational Technology Development and Exchange*, *3*(1), 101-114.

Lunday, J. (2010). *Managing the workplace ethics of social media*. Retrieved from http://corporatecomplianceinsights.com/managing-the-workplace-ethics-of-social-media/

Luo, M., Chea, S., & Chen, J. (2011). Web-based information service adoption: A comparison of the motivational model and the uses and gratifications theory. *Decision Support Systems, 51* (1), 21-30.

MacCallum, R. C., Widaman, K. F., Zhang, S., & Hong, S. (1999). Sample size in factor analysis. *Psychological methods*, *4*(1), 84.

Macredie, R. D., & Mijinyawa, K. (2011). A theory-grounded framework of Open Source Software adoption in SMEs. *European Journal of Information Systems*, *20*(2), 237-250.

Magro, M. J., Sharp, J. H., Ryan, K., & Ryan, S. D. (2013). Investigating ways to use Facebook at the university level: A Delphi study. *Issues in Informing Science and Information Technology*, *10*, 295-311.

Manan, N., Alias, A., & Pandian, A. (2012). Utilizing a social networking website as an ESL pedagogical tool in blended learning environment: An exploratory study. *International Journal of Social Sciences and Education, 2*(1), 1-9.

Mandernach, B. J. (2006). Thinking critically about critical thinking: integrating online tools to promote critical thinking. *Insight: A Collection of Faculty Scholarship, 1*, 41–50.

Maqableh, M. M., Rajab, L., Quteshat, W., Moh'd Taisir Masa, R. E., Khatib, T., & Karajeh, H. (2015). The Impact of Social Media Networks Websites Usage on Students' Academic Performance. *Communications and Network*,*7*(04), 159.

Mathieson, K. (1991). Predicting user intentions: Comparing the technology acceptance model with the theory of planned behavior. *Information systems research, 2*(3), 173-191.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *The Academy of Management Review*, *20*(3), 709-734. doi:10.2307/258792

Mazer, J. P., Murphy, R. E., & Simonds, C. J. (2007). I'll see you on "Facebook": The effects of computer-mediated teacher self-disclosure on student motivation, affective learning, and classroom climate. *Communication Education*, *56*(1), 1-17.

Mbodila, M., Ndebele, C., & Muhandji, K. (2014). The Effect of Social Media on Student's Engagement and Collaboration in Higher Education: A Case Study of the Use of Facebook at a South African University. *Journal of communications*, *5*(20), 115-125.

Mehdinezhad, V. (2011). First year students' engagement at the university. *International Online Journal of Educational Sciences*, *3*(1), 47-66.

Mertler, C. A., & Vannatta, R. A. (2010). *Advanced and multivariate statistical methods: Practical application and interpretation* (4th ed.). Glendale, CA: Pyrczak Publishing.

Messick, S. (1995). Validity of psychological assessment: Validation of inferences from persons' responses and performances as scientific inquiry into score meaning. *American psychologist*, *50*(9), 741-749.

Ministry of Education. (2015). Universities' Statistics. Retrieved from the Ministry of Education, Saudi Arabia: http://departments.moe.gov.sa/PlanningInformation/RelatedDepartments/Educatio nstatisticscenter/EducationDetailedReports/Docs/table4-4.html

Molluzzo, J. C., Lawler, J. (2014). A Comparison of Faculty and Student Perceptions of Cyberbullying. *Information Systems Education Journal, 12*(2) 47-63.

Moore, G.C., & Benbasat, I. (1991). Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information Systems Research, 2*(3), 192-222.

Moran, M., Seaman, J., & Tinti-kane, H. (2011). Teaching, learning, and sharing: How today's higher education faculty use social media. *Research report published by Pearson, The Babson Survey Research Group, and Converseon*. Retrieved from. http://files.eric.ed.gov/fulltext/ED535130.pdf

Mouzakitis, G. S. (2009). E-Learning: The six important "Wh…?". *Procedia-Social and Behavioral Sciences*, *1*(1), 2595–2599.

Mutula, S. M. (2013). Policy gaps and technological deficiencies in social networking environments: Implications for information sharing. *SA Journal of Information Management*, *15*(1), 1–9. doi:10.4102/sajim.v15i1.542

Next Thing Now. (2008, July 06). *Universal Mccann on Social Media*. Retrieved February 10, 2017, from http://www.scribd.com/doc/3836535/Universal-Mccann-on-Social-Media

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.

Obeidat, B., Shannak, R. O., Masa'deh, R., & Al-Jarrah, I. (2012). Toward better understanding for Arabian culture: Implications based on Hofstede's cultural model. *European Journal of Social Sciences*, *28*(4), 512-522.

Okello-Obura, C., & Ssekitto, F. (2015). Web 2.0 technologies application in teaching and learning by Makerere University academic staff. *Library Philosophy and Practice.* Paper 1248. Retrieved from http://digitalcommons.unl.edu/libphilprac/1248

Ololube, N., Eke, P., Uzorka, M., Ekpenyong, N., & Nte, N. (2009). Instructional technology in higher education: A case of selected universities in the Niger Delta. *Asia-Pacific Forum on Science Learning and Teaching, 10*(2).

Osorio, C., & Papagiannidis, S. (2014). Main factors for joining new social networking sites. In Nah F.FH. (ed.), *HCI in Business. HCIB 2014. Lecture Notes in Computer Science, Vol 8527.* Springer, Cham

Pahnila, S., Siponen, M., & Zheng, X. (2011). Integrating habit into UTAUT: The Chinese eBay case. *Pacific Asia Journal of the Association for Information Systems*, *3*(2), 1-30.

Paver, J., Walker, D. A., & Hung, W. C. (2014). Factors that Predict the Integration of Technology for Instruction by Community College Adjunct Faculty. *Community College Journal of Research and Practice*, *38*(1), 68-85.

Paver, J. D. (2012). *Factors influencing the integration of technology by community college adjunct faculty* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 3552295)

Pedro, N. (2011, October). E-learning & Higher Education: Strengths and Weaknesses
from Students' Perspective. In *E-Learn: World Conference on E-Learning in
Corporate, Government, Healthcare, and Higher Education* (Vol. 2011, No. 1,
pp. 1610-1619).

Peslak, A., Ceccucci, W., & Sendall, P. (2012). An empirical study of social networking
behavior using theory of reasoned action. *Journal of Information Systems Applied
Research (JISAR)*, *5*(3), 12-23

Pike, G. R., Kuh, G. D., & McCormick, A. C. (2011). An investigation of the contingent
relationships between learning community participation and student
engagement. *Research in Higher Education*, *52*(3), 300-322.

Polites, G. L. (2009). *The duality of habit in information technology acceptance*
(Unpublished doctoral dissertation). University of Georgia, Athens, GA.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon,9*(5), 1−6.

Prensky, M. (2006). Listen to the natives. *Educational Leadership, 63*(4), 8-13.

Renda dos Santos, L. M., & Okazaki, S. (2016). Planned e-learning adoption and
occupational socialisation in Brazilian higher education. *Studies in Higher
Education*, *41*(11), 1974-1994. Retrieved February 18, 2017 from
http://departments.moe.gov.sa/PlanningInformation/RelatedDepartments/Educatio
nstatisticscenter/EducationDetailedReports/Docs/table4-4.html

Reuben, R. (2008). The use of social media in higher education for marketing and communications: A guide for professionals in higher education. Retrieved from http://doteduguru.com/wp-content/ uploads/2008/08/social-media-in-higher-education.pdf

Rogers, E. M. (1983). *Diffusion of innovations* (4th ed.). New York: The Free Press.

Rogers, E.M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: Free Press. Routledge.

Sadaf, A. (2013). *An investigation of the factors that influence preservice teachers' intentions and actual integration of web 2.0 technologies* (Order No. 3592099). Available from ProQuest Dissertations & Theses Global. (1436971046). Retrieved from

https://search.proquest.com/docview/1436971046?accountid=142908

Sadaf, A., Newby, T. J., & Ertmer, P. A. (2012). Exploring factors that predict pre-service teachers' intentions to use Web 2.0 technologies using decomposed theory of planned behavior. *Journal of Research on Technology in Education*, *45*(2), 171-196

Salahshour, M., Dahlan, H. M., Iahad, N. A., Nilashi, M., & Ibrahim, O. (2015). Using a multi-criteria decision making approach for assessing the factors affecting social network sites intention to use. *Journal of Soft Computing and Decision Support Systems*, *2*(3), 20-28.

Saudi Ministry of Finance. (2014). Recent Economic Developments and Highlights of

   Fiscal Years [Press release]. Retrieved from

   https://www.mof.gov.sa/English/DownloadsCenter/Budget/Ministry's%20of%20F

   inance%20statment%20about%20the%20national%20budget%20for%202015.pdf

Schlenkrich, L., & Sewry, D. (2012). Factors for successful use of social networking sites

   in higher education. *South African Computer Journal*, *49*(1), 12-24.

   doi:10.18489/sacj.v49i0.78

Shahzad, B., Alwagait, E., & Alim, S. (2014). Investigating the relationship between

   social media usage and students' grades in Saudi Arabia: A mixed method

   approach. *Recent Advances in Electrical Engineering and Educational*

   Technologies, 211-214.

Shimp, T. A., & Kavas, A. (1984). The theory of reasoned action applied to coupon

   usage. *Journal of consumer research*, *11*(3), 795-809.

Siau, K., Nah, F., & Teng, L. (2002). Acceptable internet use policy. *Communications of*

   the Communications of the ACM, *45*(1), 75-79.

Siemens, G. (2004). Connectivism: A learning theory for the digital age. (Retrieved April

   6, 2070 from). http://www.elearnspace.org/Articles/connectivism.html

Smarkola, C. (2008). Efficacy of a planned behavior model: Beliefs that contribute to

   computer usage intentions of student teachers and experienced

   teachers. *Computers in Human Behavior*, *24*(3), 1196-1215.

Sobaih, A. E. E., Moustafa, M. A., Ghandforoush, P., & Khan, M. (2016). To use or not

    to use? Social media in higher education in developing countries. *Computers in*

    Human Behavior, *58*(1), 296-305.

Stevens, J. (2009). *Applied multivariate statistics for the social sciences*. New York, NY:

    Routledge.

Stone, E. F., Gueutal, H. G., Gardner, D. G., & McClure, S. (1983). A field experiment

    comparing information-privacy values, beliefs, and attitudes across several types

    of organizations. *Journal of Applied Psychology*, *68*(3), 459-468.

Storsul, T., Arnseth, H. C., Bucher, T., Enli, G., Hontvedt, M., Kløvstad, V. & Maasø,

    A. (2008). *New web phenomena: Government administration and the culture of*

    sharing. Oslo University, Department of Media and Communication. Retrieved

    February 10, 2017, from http://www.duo.uio.no/publ/mediekomm/

    2008/86099/NewWebPhenomena-report.pdf

Sue, V. M., & Ritter, L. A. (2007). *Conducting online surveys*. Thousand Oaks, CA:

    Sage.

Suhr, D. D. (2006). *Exploratory or confirmatory factor analysis?*. Cary: SAS Institute.

Sukkar, A. A., & Hasan, H. (2005). Toward a model for the acceptance of Internet

    banking in developing countries. *Information Technology for Development*, *11*(4),

    381–398. doi:10.1002/itdj.20026

Tarantino, K., McDonough, J., & Hua, M. (2013). Effects of student engagement with

    social media on student learning: A review of literature. *The Journal of*

    Technology in Student Affairs, *1*(8), 1-8.

Tariq, W., Mehboob, M., Khan, M. A., & Ullah, F. (2012). The impact of social media and social networks on education and students of Pakistan. *International Journal of Computer Science Issues, 9*(3), 407–411.

Tay, E., & Allen, M. (2011). Designing social media into university learning: technology of collaboration or collaboration for technology?. *Educational Media International*, *48*(3), 151-163.

Taylor, S., & Todd, P. (1995). Decomposition and crossover effects in the theory of planned behavior: A study of consumer adoption intentions. *International journal of research in marketing*, *12*(2), 137-155.

Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information systems research*, *6*(2), 144-176.

Teo, T. S. H., Lim, V. K. G., & Lai, R. Y. C. (1999). Intrinsic and extrinsic motivation in Internet usage. *Omega*, *27*(1), 25–37. doi:10.1016/s0305-0483(98)00028-0

Teo, T., Fan, X., & Du, J. (2015). Technology acceptance among pre-service teachers: Does gender matter? *Australasian Journal of Educational Technology*, *31*(3), 235-251. doi:10.14742/ajet.1672

Tornatzky, L. G., & Klein, K. J. (1982). Innovation characteristics and innovation adoption-implementation: A meta-analysis of findings. *IEEE Transactions on Engineering Management*, *EM-29*(1), 28–45. doi:10.1109/tem.1982.6447463

Trafimow, D., Sheeran, P., Conner, M., & Finlay, K. A. (2002). *Evidence that perceived behavioural control is a multidimensional construct: Perceived control and perceived difficulty. British Journal of Social Psychology*, *41*(1), 101-121. DOI: 10.1348/014466602165081

Trochim, W., & Donnelly, J. (2008). *Research methods knowledge base*. Mason, OH: Atomic Dog/Cengage Learning.

Tyagi, S. (2012). Adoption of Web 2.0 technology in higher education: A case study of universities in National Capital Region, India. *International Journal of Education and Development using Information and Communication Technology*, *8*(2), 28-43.

Ul Hadia, N., Abdullah, N., & Sentosa, I. (2016). An easy approach to exploratory factor analysis: Marketing perspective. *Journal of Educational and Social Research,* *6*(1), 215. doi:10.5901/jesr.2016.v6n1p215

Van Eck, R. (2006). Digital game-based learning: It's not just the digital natives who are restless. *EDUCAUSE review*, *41*(2), 16.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, *27*(3), 425-478.

Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly, 36*(1), 157-178.

Verplanken, B., & Aarts, H. (1999). Habit, attitude, and planned behavior: Is habit an empty construct or an interesting case of goal-directed automaticity? *European Review of Social Psychology*, *10*(1), 101–134. doi:10.1080/14792779943000035

Wai, W., Ma, K., Hoi, A., & Yuen, K. (2009). Gender differences in information technology acceptance. *Human Computer Interaction: Concepts, Methodologies, Tools, and Applications*, *4*(1), 2287–2295. doi:10.4018/978-1-87828-991-9.ch151

Wang, J. (2013). What Higher Educational Professionals Need To Know About Today's Students: Online Social Networks. *The Turkish Online Journal of Educational Technology*, *12*(3).

Warner, R. M. (2012). *Applied statistics: From bivariate through multivariate techniques*. Thousand Oaks, CA: Sage.

Welch, B. K., & Bonnan-White, J. (2012). Twittering to increase student engagement in the university classroom. *Knowledge Management & E-Learning: An International Journal (KM&EL)*, *4*(3), 325-345.

Wiese, M., Lauer, J., Pantazis, G., & Samuels, J. (2014). Social networking experiences on Facebook: A survey of gender differences amongst students. *Acta Commercii*, *14*(1), 1-7. doi:10.4102/ac.v14i1.218

Xanthidis, D., & Alali, A. S. (2014). Investigating the attitude of the average Saudi towards the Social Media. In *WSEAS Conference Proceedings on Applied Computational Science, ACACOS* (Vol. 14, pp. 86-94).

Yakin, I., & Tinmaz, H. (2013). Theoretical Guidelines for the Utilization of Instructional Social Networking Websites. *Turkish Online Journal of Distance Education*. *16*(4), 67-83.

Yang, C., and Chang, Y. S. (2012). Assessing the effects of interactive blogging on student attitudes towards peer interaction, learning motivation, and academic achievements. *Journal of Computer Assisted Learning, 28*(2), 126-135.

Zarrella, D., (2010). *The social media marketing book* (1th ed.). Canada, O'Reilly Media.

Zawacki-Richter, O., Müskens, W., Krause, U., Alturki, U., & Aldraiweesh, A. (2015). Student media usage patterns and non-traditional learning in higher education. *The International Review Of Research In Open And Distributed Learning, 16*(2). doi: http://dx.doi.org/10.19173/irrodl.v16i2.1979

Zelick, S. (2013). *The perception of web 2.0 technologies on teaching and learning in higher education: a case study* (Doctoral dissertation, Capella University, 2013) (pp. 1-209). Ann Arbor, MI: ProQuest.

Zgheib, G., & Dabbagh, N. (2013). Exploring social media learning activities and perceptions of faculty and students' use of social media in higher education. *Innovations in Teaching & Learning Conference Proceedings, 5, Compact Sessions III. doi:http://dx.doi.org/10.13021/G83W41*

Appendix A: Permission Request for Using the Survey

Reply all | ∨   Delete   Junk | ∨   ⋯   ✕

Dear Dhaifallah,

Please feel free to use or modify my instrument. All the best your dissertation research!

Best,
Dr. Sadaf

Ayesha Sadaf, Ph.D.
Assistant Professor, Instructional Systems Technology
Dept. of Educational Leadership | UNC Charlotte
Cato College of Education | CCOED 277
9201 University City Blvd, Charlotte, NC 28223
704.687.8867-3 | asadaf@uncc.edu | http://edld.uncc.edu/directory/ayesha-sadaf

On Tue, Mar 28, 2017 at 7:28 PM, Alsuhaymi, Dhaifallah <da483111@ohio.edu> wrote:

Dear Dr.Sadaf,

My name is Dhaifallah Alsuahymi and I am a graduate student at Ohio University working on a proposal for my dissertation. I would like to request permission to use the survey used in your dissertation entitled "An investigation of the factors that influence preservice Teachers' intentions and actual integration of web 2.0 Technologies". Since I would like to examine the intention toward the adoption of social media and examine the possible benefits and barriers, I might also modify the instrument to match with the purpose of my study.

I appreciate your consideration and I look forward to hearing from you.

Sincerely,

Dhaifallah Alsuhaymi

Reply all | ∨   Delete   Junk | ∨   ⋯

Re: Seeking a Permission in order to Use Your Instrument

RH   Richard Hartshorne <rhartshorne@gmail.com>   👍   Reply all | ∨
       Mon 3/27, 10:49 PM
       Alsuhaymi, Dhaifallah ⥥

Inbox

Flag for follow up.

Hello Dhaifallah,

You have my permission to use the instrument and adapt as necessary. Good luck with your scholarship.

Cheers,

Richard

On Fri, Mar 24, 2017 at 6:59 AM, Rick Ferdig <rferdig@gmail.com> wrote:

Hi Dhaifallah Alsuhaymi: I have CC'd this to Dr. Hartshorne. You would need his approval. Thanks, RF

From: Alsuhaymi, Dhaifallah [mailto:da483111@ohio.edu]
Sent: Friday, March 24, 2017 1:35 AM
To: rferdig@gmail.com; rferdig@kent.edu
Subject: Seeking a Permission in order to Use Your Instrument

Reply all | ∨   🗑 Delete   Junk | ∨   •••   ✕

RE: Seeking a permission in order to use part of your Instrument

TD   Tamara Dinev <tdinev@fau.edu>   🔖   ↩ Reply all | ∨
         Yesterday, 2:29 PM
         Alsuhaymi, Dhaifallah ☰

Inbox

Hello Dhaifallah:

Thank you for your email. As long as my work is properly cited in your paper and work, I approve your using the instrument. Good luck!

Best Regards:
Tamara
===========================
Tamara Dinev, Ph.D.
Department Chair and Professor
Dean's Research Fellow
Department of Information Technology and Operations Management
College of Business
Florida Atlantic University
Boca Raton, Florida 33431
OFFICE: Fleming Hall, 219
TEL: (561) 297-3181
FAX: (561) 297-3043
e-mail: tdinev@fau.edu

From: Alsuhaymi, Dhaifallah [mailto:da483111@ohio.edu]
Sent: Wednesday, April 05, 2017 12:12 PM
To: Tamara Dinev <tdinev@fau.edu>
Subject: Seeking a permission in order to use part of your Instrument

Dear Dr Dinev

Appendix B: The IRB Approval

Project Number	17-E-145
Project Status	APPROVED
Committee:	Office of Research Compliance
Compliance Contact:	Rebecca Cale (cale@ohio.edu)
Primary Investigator:	Dhaifallah Alsuhaymi
Project Title:	Understanding Factors that Influence Imam Abdulrahman Bin Faisal Faculty Members' Intentions to Adopt Social Media in their Teaching Practices
Level of Review:	EXEMPT

The Ohio University Office of Research Compliance reviewed and approved by exempt review the above referenced research. The Office of Research Compliance was able to provide exempt approval under 45 CFR 46.101(b) because the research meets the applicability criteria and one or more categories of research eligible for exempt review, as indicated below.

IRB Approval:	04/17/2017 09:08:20 AM
Review Category:	2

Waivers: N/A

If applicable, informed consent (and HIPAA research authorization) must be obtained from subjects or their legally authorized representatives and documented prior to research involvement. In addition, FERPA, PPRA, and other authorizations must be obtained, if needed. The IRB-approved consent form and process must be used. Any changes in the research (e.g., recruitment procedures, advertisements, enrollment numbers, etc.) or informed consent process must be approved by the IRB before they are implemented (except where necessary to eliminate apparent immediate hazards to subjects).

It is the responsibility of all investigators and research staff to promptly report to the Office of Research Compliance / IRB any serious, unexpected and related adverse and potential unanticipated problems involving risks to subjects or others.

This approval is issued under the Ohio University OHRP Federalwide Assurance #00000095. Please feel free to contact the Office of Research Compliance staff contact listed above with any questions or concerns.

Appendix C: Imam Abdulrahman Bin Faisal University's Approval to Conduct the Study

Kingdom of Saudi Arabia
Ministry of Education
University of Dammam
Office of the Vice President for
Research & Higher Studies

جامعة الإمام عبدالرحمن بن فيصل
IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY

المملكة العربية السعودية
وزارة التعليم
جامعة الإمام عبد الرحمن بن فيصل
وكالة الجامعة للدراسات
العليا والبحث العلمي

اللجنة الدائمة لأخلاقيات البحث على المخلوقات الحية
Institutional Review Board

IRB Number	IRB –PGS-2017-10-082		أيرب-بجس-٠٨٢-١٠-٢٠١٧
Project Title	Understanding Factors that Influence Imam Abdulrahman Bin Faisal Faculty Members' Intentions to Adopt Social Media in their Academic Practices		
Principal Investigator	Postgraduate Student / Dhaifallah Alsuhaymi		
Supervisor	Dr. Hassan Farouk Hassan		
College / Center	Education Dammam	**Department**	Curricula and Teaching Methods
Approval Date	29/03/2017		

The application was reviewed and approved at the University of Dammam IRB meeting on Wednesday, March 29, 2017.

Approval is given for one year from the date of approval. Projects, which have not commenced within six months of the original approval, must be re-submitted to the University Institutional Review Board (IRB) Committee. If you are unable to complete your research within the validation period, you will be required to request an extension from the IRB Committee.

On completion of the research, the Principal Investigator is required to advise the Institutional Review Board if any changes are made to the protocol, a revised protocol must be submitted to the Institutional Review Board for reconsideration.

Approval is given on the understanding that the "Guidelines for Ethical Research Practice" are adhered to. Where required, a signed written consent form must be obtained from each participant in the study group.

Dean of Scientific Research

Dr. Naif Nasser Almasoud

جامعة الدمام
UNIVERSITY OF DAMMAM
عمـــــادة البحث العلمي
Deanship of Scientific Research

Stamp

CC. – Dean
　　Deanship of Scientific Research
– Director General
　King Fahd Hospital of the University
– Director
　Center for Research and Medical Consultations
– Supervisor General for Quality and Safety
　King Fahd Hospital of the University
– Director
　Monitoring Office for Research and Research Ethics
– Director
　Pharmacy @ KFHU

Appendix D: The Questionnaires Used for Pilot Test

Section One: Demographic Questions

1. Gender

   o   Male   o   Female

2. Nationality

   o   Saudi   o   Non-Saudi

3. Please enter your age in years

4. Please enter your teaching experience in colleges or universities in years

5. What is your academic rank?

o   Teaching   o   Lecturer   o   Assistant   o   Associate   o   Professor
    Assistant   Professor   Professor

6. Please select your college:

o   Health   o   Engineering   o   Sciences and   o   Arts and
    college   college   Management   Education
                                                 college   college

7. What social media tools do you usually use in your daily life? (please select all
   that apply)

   o   Blogs (such as, Blogger or WordPress)

   o   Wikis (such as, Wikipedia or Wikispaces)

   o   Social networking (such as, Facebook, Google+, or LinkedIn)

   o   Microblogging (such as, Twitter)

o   Instant Messaging (such as, WhatsApp or LINE)

o   Video conference (such as, Google hangout or skype)

o   Media sharing (such as, YouTube, Instagram, or Snapchat)

Section Two: Perceived benefits of using social media

1. To what extent do you use the following social media applications to supplement/improve your teaching? (Don't use and don't plan to use, Don't use but plan to use, Use occasionally, Frequently Use, Always Use, NA)

    o   Blogs (such as, Blogger or WordPress)

    o   Wikis (such as, Wikipedia or Wikispaces)

    o   Social networking (such as, Facebook, Google+, or LinkedIn)

    o   Microblogging (such as, Twitter)

    o   Instant Messaging (such as, WhatsApp or LINE)

    o   Video conference (such as, Google hangout or skype)

    o   Media sharing (such as, YouTube, Instagram, or Snapchat)

2. What are the advantages of using social media technologies to supplement your teaching method? (please select all that apply)

    o   Improve students' interaction with faculty

    o   Improve students' learning

    o   Improve student's satisfaction with the course

    o   Improve students' interaction with other students

    o   It could be easily integrated into my course

    o   Easy for instructors to share content and knowledge

- o   Improve student's writing ability

- o   Improve collaborative learning of students

3. What are the risks associated with the use of social media in teaching? (please select all that apply)

- o   Critical remarks about staff, faculty or students

- o   Cyberbullying

- o   Cyberstalking

- o   Distractions in class

- o   Inappropriate or illegal material posted on social media websites

- o   Online threats

- o   Privacy

- o   Sharing of protected information

Section Three: Faculty intention to embrace social media in their teaching practice

Thinking of the social media tools you plan to use in your teaching, please choose a number between 1 and 4 on a Likert-type scalethat reflect your agreement with the statements. Higher numbers indicate a high level of agreement (3=Agree, 4=Strongly Agree), and lower numbers indicate less agreement (1=Strongly Disagree, 2=Disagree).

Items	Strongly disagree	Disagree	Agree	Strongly Agree
	1	2	3	4
1. I plan to use social media technologies in my classroom.				
2. I intend to use social media technologies within the next semester.				
3. I will add social media technologies to my class next semester.				
4. Social media will be useful in my teaching.				
5. The advantages of using social media outweighs the disadvantages of not using it.				
6. Using social media is a good idea.				
7. I feel that using social media will be easy to use.				
8. I feel that using social media will be easy to incorporate in my classroom environment.				
9. I feel that using social media will help my students learn more about the subject.				
10. I feel that using social media will improve my students' satisfaction with the course.				
11. I feel that using Social media will improve students' grades.				
12. I feel that using Social media will improve students' evaluation.				
13. To help my students better learn the material, I will incorporate social media technologies in my future classroom.				
14. My peers are using social media technologies in their classrooms.				

15. My superiors confirms my ability and knowledge to use social media technologies in my classroom.				
16. My peers think I will benefit from using social media technologies in my classroom.				
17. My superiors think it is important I use social media technologies in my classroom.				
18. My students think it is important to use social media technologies in my classroom.				
19. Using the social media technologies is entirely within my control.				
20. I have the knowledge and ability to use social media.				
21. Peers who influence my behavior would think that I should use social media technologies in the classroom.				
22. Peers who are important to me would think that I should use social media technologies in the classroom.				
23. My superior (dean of the college), who influences my behavior would think that I should use social media technologies in the classroom.				
24. My superior (college department chair), whom I report to would think that I should use social media technologies in the classroom.				
25. Students who influence my behavior (weaker students) think that I should use social media technologies in the classroom.				
26. Students who are important to me (better students) think that I should use social media technologies in the classroom.				

27. Using social media are compatible with the way I teach.				
28. Using social media technologies aligns with the subject I teach.				
29. I have enough time to integrate social media into my teaching practice.				
30. The existence of social media policy use would encourage me to integrate social media into my teaching practice.				
31. My University provides adequate training to enable me to integrate social media into my teaching practice.				
32. I have convenient internet connection to integrate social media into my teaching practice.				
33. My university provide the technical support I might need to incorporate social media into my teaching practice.				
34. I would feel comfortable using social media technologies.				
35. I could easily use social media technologies on my own.				
36. I know enough to use social media technologies.				
37. I am concerned that the information I submit on the Internet could be misused.				
38. I am concerned that a person can find private information about me on the Internet				
39. I am concerned about submitting information on the Internet because it could be used in a way I did not foresee.				

Section Four: Open-Ended question

1. If you have ever used any of social media tools in your teaching practices, please provide what are the reasons that prompted you to use these tools? If you have not used any of social media tools in your teaching practices yet, please provide reasons that preventing you from use these tools?

Thanks for your time spent to complete this survey

الاستبانة

القسم الأول: معلومات أساسية

8. الجنس

○ ذكر   ○ أنثى

الجنسية

○ سعودي   ○ غير سعودي

10. الرجاء تحديد عمرك بالسنوات

11. الرجاء تحديد عدد سنوات التدريس الجامعي

12. مرتبتك الأكاديمية الحالية:

○ معيد   ○ محاضر   ○ أستاذ مساعد   ○ أستاذ   ○ أستاذ
مشارك

13. ما الكلية التي تنتمي إليها:

○ كليات الآداب   ○ كليات العلوم   ○ الكليات   ○ الكليات
                      و التربية   الإدارة   الهندسية   الصحية

14 ما هي وسائل التواصل الاجتماعي التي تستخدمها في حياتك اليومية؟ (يمكن اختيار أكثر من خيار)

○ المدونات (مثل بلوقر، أو وورد برس)

○ ويكي (مثل ويكيبيديا، أو ويكي سيس)

○ الشبكات الاجتماعية (مثل فيسبوك، لينكدإن، أو قوقل بلس)

○ المدونات الصغيرة (مثل تويتر)

○ المرسال الفورية (مثل واتس اب، أو لاين)

محادثات الفيديو (مثل سكايب، أو قوقل هانق اوت)

○ مشاركة الوسائط (مثل إنستقرام، أو سناب شات)

القسم الثاني: فـوائـد وأضـرار استخدام وسائل التواصل الاجتماعي في التعليم

إلى أي مدى تستخدم وسائل التواصل الاجتماعي في عملية تدريس الطلاب؟ (لا أستخدمها ولا أخطط لاستخدامها، الستخدمها حاليا لكني أخطط لتركها في المستقبل، استخدامها نادراً، أستخدمها غالباً، أستخدمها دائماً)

○ المدونات (مثل بلوقر، أو وورد برس)

○ ويكي (مثل ويكيبيديا، أو ويكي سبيس)

○ الشبكات الاجتماعية (مثل فيسبوك، لينكدين قوقل بلس)

○ المدونات الصغيرة (مثل تويتر)

○ المراسلة الفورية (مثل واتس اب، أو لاين)

محادثات الفيديو (مثل سكايب و قوقل هانق اوت)

○ مشاركة الوسائط (مثل إنستقرام، أو سناب شات)

5. ما هي فوائد استخدام وسائل التواصل الاجتماعي في عملية مساعدة في تدريس الطلاب من وجهة نظرك؟

(يمكنك اختيار أكثر من خيار)

○ تحسن تفاعل الطلاب مع الأستاذ

○ تحسن تعلم الطلاب

○ تزيد من رضا الطلاب عن المادة الدراسية

○ تزيد من تفاعل الطلاب مع بعضهم البعض

○ يستطيع المعلم شرحها بسهولة في المادة الدراسية

○ تسهل عملية مشاركة المحتوى الدراسي والمعلومات

○ حسن قدرات الطلاب على الكتابة

o تشجع الطالب على التعاون

6. ما هي المخاطر التي تعتقد تصاحب استخدام وسائل التواصل الاجتماعي التعليم؟)يمكنك اختيار أكثر من خيار(

o يكون منصة لنشر انتقادات ساخرة لأعضاء هيئة التدريس أو الطالب

o التنمر الإلكتروني)الابتزاز(

o المطاردة الإلكترونية

o تشتيت الطالب

o نشر محتويات غير قانونية و غير مناسبة في الشبكات الاجتماعية

o تبادل التهديدات بين الطلاب

o انتهاك الخصوصيات

o نشر معلومات سرية

القسم الثالث: حدد مدى موافقتك مع العبارات التالية.)١= غير موافق بشدة، ٢= غير موافق، ٣= موافق، ٤= موافق بشدة(

موافق بشدة	موافق	غير موافق	غير موافق بشدة	العبارة
٤	٣	٢	١	
				1. أنوي)أخطط(لاستخدام وسائل التواصل الاجتماعي في التدريس مستقبلاً.
				2. أنوي استخدام وسائل التواصل الاجتماعي في الفصل الدراسي القادم.
				3. أنا سعيد وأقوم بدمج وسائل التواصل الاجتماعي في تدريسي.

				4 إستخدام وسائل التواصل الاجتماعي يكون مفيداً في دعم تدريسي
				5 أنا أعتقد أن مزايا استخدام وسائل التواصل الاجتماعي في التدريس أكثر من مساوئها.
				6. أرى أن تقنية استخدام وسائل التواصل الاجتماعي فكرة جيدة.
				7 أنا أعتقد سهولة استخدام وسائل التواصل الاجتماعي.
				8 أنا أعتقد سهولة دمج وسائل التواصل الاجتماعي مع طريقة تدريسي.
				9 أنا أعتقد أن استخدام وسائل التواصل الاجتماعي سوف يساعد الطلاب في تحقيق تعلم أفضل عن الموضوع قيد الدراسة.
				10. استخدام وسائل التواصل الاجتماعي سوف يزيد من رضاء الطالب عن المهام الدراسية
				11. أنا أعتقد أن استخدام وسائل التواصل الاجتماعي سوف يحسن تحصيل الطالب.
				12. أنا أعتقد أن استخدام وسائل التواصل الاجتماعي سوف يحسن تقييم الطالب بين في الفصل الدراسي لطريقة تدريس المدرس.
				13. لمساعدة الطلاب على التعلم بشكل أفضل على المقدرات الدراسية، سوف أقوم بدمج وسائل التواصل الاجتماعي في تدريسي في المستقبل.
				14. مالي في الجامعة يستخدمون وسائل التواصل الاجتماعي في تدريسهم.

				15. رئيسي المباشر في الجامعة يؤكد أن لدي القدرة والمعرفة على استخدام وسائل التواصل الاجتماعي
				16. زملائي في الجامعة يعتقدون أن استخدام وسائل التواصل الاجتماعي سوف يؤثر في تدريسي.
				17. رئيسي في الجامعة يعتقد أنه من المهم استخدام وسائل التواصل الاجتماعي في التدريس.
				18. زملائي في الجامعة يعتقدون أنه من المهم استخدام وسائل التواصل الاجتماعي في تدريسي.
				19. استخدام وسائل التواصل الاجتماعي هو قرار خاص بي أنا فقط
				20. لدي المعرفة والقدرة على استخدام وسائل الاعلام الاجتماعية.
				21. زملائي الذين أؤثر في سلوكهم والذين اعتبر مثال للمعلم الجيد يعتقدون أن من المفترض أن استخدم وسائل التواصل الاجتماعي
				22. زملائي المهمين بالنسبة لي (الذين لي علاقات معهم) يعتقدون أن من المفترض أن استخدم وسائل التواصل الاجتماعي
				23. مسؤولي غير المباشر) عميد الكلية(،الذين أؤثر على سلوكهم يعتقد أن يجب استخدام وسائل التواصل الاجتماعي في تدريسي.
				24. مسؤولي المباشر)رئيس القسم(،الذي أقوم بتزويده بالتقارير يعتقد أن يجب استخدام وسائل التواصل الاجتماعي في التدريس.

				٢٥. للطلاب الذين يؤثرون على سلوكي أقوم ... من أجل ... يقدمون أي ... استخدام وسائل التواصل الاجتماعي في التدريس.
				٢٦. للطلاب ... في ... سلوك الطلاب الحسن أو للطلاب ... يقدمون أي ... استخدام وسائل التواصل الاجتماعي في التدريس.
				٢٧. استخدام وسائل التواصل الاجتماعي ... مناسب مع طريقة تدريسي.
				٢٨. استخدام وسائل التواصل الاجتماعي يتألم مع المحتوى الذي أقوم بتدريسه.
				٢٩. لدي ... في ... الوقت لدمج وسائل التواصل الاجتماعي في التدريس.
				٣٠. وجود سياسات تنظم لوسائل التواصل الاجتماعي سوف يشجعني على دمج وسائل التواصل الاجتماعي في التدريس.
				٣١. تقوم جامعتي ... في التدريب الكافي الذي يمكنني من دمج وسائل التواصل الاجتماعي في التدريس.
				٣٢. لدي اتصال انترنت جيد لدمج وسائل التواصل الاجتماعي في التدريس.
				٣٣. تقدم جامعتي الدعم الفني الذي قد أحتاج لدمج وسائل التواصل الاجتماعي في عملية التعليم.
				٣٤. أستطيع استخدام تقنيات وسائل التواصل الاجتماعي بكل سهولة.
				٣٥. يمكنني بسهولة استخدام تقنيات وسائل التواصل الاجتماعية دون طلب مساعدة.

				أنا أعرف يكفي لاستخدام تقنيات وسائل التواصل الاجتماعي.	3 6
				لدي مخاوف من أن المعلومات التي أقدمها على الإنترنت يمكن أن يساء استخدامها.	3 7
				لدي مخاوف من أن شخص ما قد يتطلع غير حاصل على معلوماتي الخاصة على الإنترنت.	3 8
				لدي مخاوف من تقيم أي معلومات على الإنترنت لأنني قد يتم إساءة استخدامها بطريقة لم أكن أتوقعها.	3 9

القسم الرابع: سؤال مفتوح

1 . اذكر الأسباب التي تدفعك لاستخدام وسائل التواصل الاجتماعي في تدريسك في حالة استخدامها مستقبلا، في حالة عدم استخدامك لأي وسيلة من وسائل التواصل الاجتماعي في تدريسك مستقبل، اذكر الأسباب ؟

Appendix E: The Invitation Email

The Arabic Invitation Email

العوامل المؤثرة على تقبل أعضاء هيئة التدريس في جامعة الإمام عبد الرحمن بن فيصل لاستخدام وسائل التواصل الاجتماعي في تدريس الطلاب

DS Dhaifallah Saleh Alsuhaymi
Sunday, April 30, 2017 at 1:21 AM
To: Saleh A. Al-Sowayan

السلام عليكم ورحمة الله و بركاته ،،،

سعادة د. صالح عبد الرحمن سليمان الصويان يطيب لي دعوتك للمشاركة في تعبئة استبيان لدراسة ميدانية لنيل درجة الدكتوراه بعنوان "العوامل المؤثرة على تقبل أعضاء هيئة التدريس في جامعة الإمام عبد الرحمن بن فيصل لاستخدام وسائل التواصل الاجتماعي في تدريس الطلاب". مشاركتكم في تعبئة الاستبيان سوف يكون لها دور كبير في إنجاح هذه الدراسة والوصول إلى نتائج أكثر دقة. علماً بأن المشاركة لن تستغرق أكثر من ١٠ دقائق. للمشاركة في هذه الدراسة، فضلاً أضغط على الرابط التالي:

https://ohio.qualtrics.com/jfe/form/SV_3RfAzzKCePO70Y5

في حال وجود استفسار يمكن التواصل مع الباحث عن طريق الإرسال للبريد الالكتروني التالي:

da483111@ohio.edu

ولكم جزيل الشكر و التقدير ،،،

ضيف الله صالح السهيمي
جامعة الإمام عبد الرحمن بن فيصل
كلية التربية- قسم المناهج وطرق التدريس

The English Invitation Email

Understanding Factors that Influence Imam Abdulrahman Bin Faisal Faculty Members' Intentions to Adopt Social Media in their Teaching Practices

DS Dhaifallah Saleh Alsuhaymi
Sunday, April 30, 2017 at 1:08 AM
To: Gulraiz Khan

Dear Dr. Gulraiz Khan ,

I would like to invite you to participate in an online survey about understanding factors that influence faculty members' intentions to adopt social media in their teaching practices. Conducting this study is required to obtain a doctorate degree. Hopefully, this survey will not need more than 10 minutes to complete. Your response is very important. Without your response, this study can't succeed. So, I hope you will help me by completing this survey. Here is the link for the survey:
https://ohio.qualtrics.com/jfe/form/SV_2rwinSkvUCHXTp3
If you have any questions regarding this study, please contact me at da483111@ohio.edu

Thank you in advance for your assistance

Dhaifallah Alsuhaymi
Imam Abdulrahman Bin Faisal University
College of Education

Appendix F: The Questionnaire in English

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Factors that Influence Faculty Members' Intentions to Adopt Social Media in their Teaching Practices

You are being asked to participate in research. For you to be able to decide whether you want to participate in this project, you should understand what the project is about, as well as the possible risks and benefits in order to make an informed decision. This process is known as informed consent. This form describes the purpose, procedures, possible benefits, and risks. It also explains how your personal information will be used and protected. Once you have read this form and your questions about the study are answered, you will be asked to participate in this study. You may print a copy of this document to take with you.

Explanation of Study

This study aims to determine the key factors that impact the intentions of the faculty toward integrating social media tools into their teaching practices. Social media refer to the Internet-based application that allows users to work collaboratively in order to create and exchange content. Social media include Facebook, Twitter, WhatsApp Blogs, YouTube, Snapchat, Instagram, Wikipedia, Flicker, Skype, and Google hangout to name a few. Determining factors that could hamper or facilitate incorporating social media in education settings should help policy makers, administrators, and technology coordinators to support the motivational factors and eliminate or reduce the inhibitory factors. As result, the adoption of social media among faculty will be increased. Participants in this study may be male or female and must be faculty members (professors, associate professors, assistant professors, lecturers, and teaching assistants), either Saudi or non-Saudi. You should not participate in this study if you are administrative staff. Your participation in the study will last about ten minutes.

Risks and Discomforts

No risks or discomforts are anticipated.

Benefits

You may not benefit, personally by participating in this study. However, your participation in this study may further the knowledge of subject matter in your field.

Confidentiality and Records

No personally identifiable information (such as name or address) will be collected through the study. So, your participation will be confidential and anonymous.
For maximum confidentiality, please clear your browser history and close the browser before leaving the computer.

Contact Information

If you have any questions regarding this study, please contact the investigator Dhaifallah Alsuhaymi, da483111@ohio.edu and +1(740)856-4201 or the advisor Dr. Greg Kessler, kessler@ohio.edu and +1(740)593-2748.

If you have any questions regarding your rights as a research participant, please contact Dr. Chris Hayhow, Director of Research Compliance, Ohio University, +1(740)593-0664 or hayhow@ohio.edu.

By clicking on "Agree" Button below, you are agreeing that:

- You read this consent form and you have been given the opportunity to ask questions and have them answered.
- your participation in this research is completely voluntary.
- You may leave the study at any time.
- If you decide to stop participating in the study, there will be no penalty to you and you will not lose any benefits to which you are otherwise entitled.

If you do not want to participate in this study, please click "Disagree" or close the internet browser.

Do want to participate in this study?

Agree

Disagree

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Section One: Demographic Questions

Gender

Male

Female

Nationality

Saudi

Non-Saudi

Please enter your age in years

Please enter your teaching experience in colleges or universities in years

What is your academic rank?

Professor

Associate Professor

Assistant Professor

Lecturer

Teaching Assistant

Please select your college:

Health college

Engineering college

Sciences and Management college

Arts and Education college

What social media tools do you usually use in your daily life? (Please select that all apply)

Blogs (such as, Blogger or WordPress)

Wikis (such as, Wikipedia or Wikispaces)

Social networking (such as, Facebook, Google+, or LinkedIn)

Microblogging (such as, Twitter)

Instant Messaging (such as, WhatsApp or LINE)

Video chat (such as, Google hangout or skype)

Media sharing (such as, YouTube, Instagram, or Snapchat)

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Section Two: Perceived usefulness and risks of using social media

To what extent do you use the following social media applications to supplement/improve your teaching?

	Do not use and do not plan to use	Do not use but plan to use	Use occasionally	Frequently Use	Always Use
Blogs (such as, Blogger or WordPress)	○	○	○	○	○
Wikis (such as, Wikipedia or Wikispaces)	○	○	○	○	○
Social networking (such as, Facebook, Google+, or LinkedIn)	○	○	○	○	○
Microblogging (such as, Twitter)	○	○	○	○	○
Instant Messaging (such as, WhatsApp or LINE)	○	○	○	○	○
Video chat (such as, Google hangout or Skype)	○	○	○	○	○
Media sharing (such as, YouTube, Instagram, or Snapchat)	○	○	○	○	○

What are the advantages of using social media technologies to supplement your teaching method? (please select all that apply)

Improve students' interaction with faculty

Improve students' learning

Improve student's satisfaction with the course

Improve students' interaction with other students

It could be easily integrated into my course

Easy for instructors to share content and knowledge

Improve student's writing ability

Improve collaborative learning of students

If other, describe

What are the risks associated with the use of social media in teaching? (please select all that apply)

Critical remarks about staff, faculty or students

Cyberbullying

Cyberstalking

Distractions in class

Inappropriate or illegal material posted on social media websites

Online threats

Privacy risk

Sharing of protected information

If other, describe

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Section Three: Faculty intention to embrace social media in their teaching practice

Thinking of the social media tools you plan to use in your teaching, please choose a number between 1 and 4 on a Likert-like scale that reflects your agreement with the statements. Higher numbers indicate a high level of agreement (3=Agree, 4=Strongly Agree), and lower numbers indicate less agreement (1=Strongly Disagree, 2=Disagree).

	Strongly Disagree	Disagree	Agree	Strongly Agree
I plan to use social media technologies in my classroom.	O	O	O	O
I intend to use social media technologies within the next semester.	O	O	O	O
I will add social media technologies to my class next semester.	O	O	O	O
Social media is useful in my teaching.	O	O	O	O
The advantages of using social media outweigh the disadvantages of not using it.	O	O	O	O
Using social media is a good idea.	O	O	O	O
I feel that using social media will be easy to use.	O	O	O	O
I feel that using social media will be easy to incorporate in my teaching.	O	O	O	O
I feel that using social media will help my students learn more about the subject.	O	O	O	O
I feel that using social media will improve my students' satisfaction with the course.	O	O	O	O
I feel that using social media will improve students' achievement.	O	O	O	O

I feel that using social media will improve students' assessment of the instructor's teaching method.	O	O	O	O
To help my students better learn the material, I will incorporate social media technologies in my classroom.	O	O	O	O
People who influence my decision would think that I should use social media in my teaching.	O	O	O	O
People who are important to me would think that I should use social media in my teaching.	O	O	O	O
Using the social media technologies is entirely within my control.	O	O	O	O
I have the knowledge and ability to use social media.	O	O	O	O
My colleagues are using social media technologies in their classrooms.	O	O	O	O
My colleagues think I will benefit from using social media technologies in my classroom.	O	O	O	O
My colleagues and friends would think that I should use social media technologies in the classroom.	O	O	O	O
My superiors (such as college department chair or dean of the college) think it is important that I use social media technologies in my classroom.	O	O	O	O
My superiors (such as college department chair or dean of the college) think that I should use social media technologies in the classroom.	O	O	O	O
My students think that it is important to use social media technologies in the classroom.	O	O	O	O
My students think that I should use social media technologies in the classroom.	O	O	O	O
Using social media is compatible with the way I teach.	O	O	O	O
Using social media aligns with the subject I teach.	O	O	O	O

I have enough time to integrate social media into my teaching practice.	○	○	○	○
The existence of social media policy use would encourage me to integrate social media into my teaching practice.	○	○	○	○
My university provides adequate training to enable me to integrate social media into my teaching practice.	○	○	○	○
My university provides adequate internet connection to integrate social media into my teaching practice.	○	○	○	○
My university provides the technical support I need to incorporate social media into my teaching practice.	○	○	○	○
I would feel comfortable using social media technologies.	○	○	○	○
I could easily use social media technologies on my own.	○	○	○	○
I know enough to use social media technologies.	○	○	○	○
I am concerned that the information I submit on the Internet could be misused.	○	○	○	○
I am concerned that a person can find private information about me on the Internet.	○	○	○	○
I am concerned about submitting information on the Internet because it could be used in a way I did not foresee.	○	○	○	○

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Section Four: Open-Ended question

If you have ever used any of social media tools in your teaching, please provide what reasons that prompted you to use these tools. If you have not used any of social media tools in your teaching yet, please provide reasons that prevent you from use these tools.

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Appendix G: The Questionnaire in Arabic

اتفاقية المشاركة في الدراسة

اسم الباحث: ضيف الله صالح السهيمي

عنوان البحث: العوامل المؤثرة على مدى تقبل أعضاء هيئة التدريس لاستخدام وسائل التواصل الاجتماعي في تدريسهم.

أخي عضو هيئة التدريس أنت مدعو للمشاركة في هذا الدراسة التي تهدف إلى تحديد العوامل الرئيسية التي تؤثر على مدى تقبل أعضاء هيئة التدريس لاستخدام وسائل التواصل الاجتماعي في تدريسهم. المقصود بوسائل التواصل الاجتماعي في هذه الدراسات كل التطبيقات أو البرامج القائمة على الانترنت والتي تسمح للمستخدم بإنشاء المحتوى وتبادله مع الآخرين مثل الفيسبوك، تويتر، واتساب، المدونات، يوتيوب، سناب شات، إينستجرام، ويكيبيديا، وسكايب ...إلخ.

إن تحديد العوامل التي يمكن أن تسهم في تسهيل أو عرقلة دمج وسائل التواصل الاجتماعي في التعليم يمكن أن يساعد صناع القرار على تعزيز العوامل المساعدة على استخدام وسائل التواصل الاجتماعي والقضاء على العوامل المعيقة أو تقليلها. علماً بأن:

- تعبئة الاستبيان لن تستغرق أكثر من عشر دقائق.
- مشاركتك لن يترتب عليها أي مسؤولية. قد لا يكون هناك أي فائدة شخصية من المشاركة في هذه الدراسة، ألا أن مشاركتك إثراء للبحث العلمي وركن أساسي لإكمال هذا البحث ونجاحه.
- مشاركتك سوف تكون سرية ومجهولة وللحصول على أقصى قدر من السرية، يرجى محو سجل المتصفح وإغلاق المتصفح قبل مغادرة الكمبيوتر.
- مشاركتك في هذه الدراسة طوعية لذلك يمكنك الانسحاب في أي وقت.

معلومات التواصل:

إذا كان لديك أي أسئلة بخصوص هذه الدراسة، يرجى التواصل مع الباحث ضيف الله السهيمي عن طريق البريد اللكتروني da483111@ohio.edu أو عن طريق الاتصال على الرقم التالي ٧٤٠٨٥٦٤٢٠١

كما يمكنك أيضاً التواصل مع المشرف الدراسي الدكتور جريج كيسلر على البريد الالكتروني التالي kessler@ohio.edu أو الاتصال على الرقم التالي ٧٤٠٥٩٣٢٧٤٨

إذا كان لديك أي أسئلة تتعلق بحقوقك كمشارك بحثي، يرجى الاتصال بالدكتور كريس هيهو، مدير الامتثال للبحوث، جامعة أوهايو على الرقم التالي ٧٤٠٥٩٣٠٦٦٤ أو التواصل على البريد الالكتروني التالي hayhow@ohio.edu

بالنقر على زر **"موافق"** أدناه، فإنك توافق على أنك قرأت استمارة الموافقة هذه وأنك أعطيت الفرصة للسؤال وأنه تم إجابة جميع استفساراتك.

إذا كنت لا ترغب في المشاركة في هذه الدراسة، يرجى النقر على **"غير موافق"** أو إغلاق متصفح الإنترنت.

لبدء الاستبيان الرجاء الضغط على **"موافق"**

موافق

غير موافق

التالي

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القسم الأول: معلومات أساسية

الجنس

ذكر

أنثى

الجنسية

سعودي

غير سعودي

الرجاء تحديد عمرك بالسنوات

الرجاء تحديد عدد سنوات العمل في التعليم الجامعي

ماهي رتبتك العلمية الحالية:

معيد

محاضر

أستاذ مساعد

أستاذ مشارك

أستاذ

ماهي الكلية التي تعمل بها:

كليات الآداب و التربية

كليات العلوم و الإدارة

الكليات الهندسية

الكليات الصحية

ماهي وسائل التواصل الاجتماعي المستخدمة في حياتك اليومية؟ (يمكنك اختيار أكثر من خيار)

المدونات (مثل: بلوقر، أو وورد بريس)

ويكي (مثل: وكيبيديا، أو ويكي سبيس)

الشبكات الاجتماعية (مثل: فيسبوك، لينكدين، أو قوقل بلس)

المدونات الصغيرة (مثل: تويتر)

المراسلة الفورية (مثل: واتس اب، أو اللاين)

محادثات الفيديو (مثل سكايب، أو قوقل هانق اوت)

مشاركة الوسائط (مثل: اليوتيوب، إنستقرام، أو سناب شات)

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القسم الثاني: الفوائد والمخاطر المحتملة من استخدام وسائل التواصل الاجتماعي في التدريس

إلى أي مدى تستخدم وسائل التواصل الاجتماعي التالية لتحسين عملية تدريس الطلاب؟

	استخدمها دائماً	استخدمها غالباً	استخدمها أحياناً	لا أستخدمها حالياً ولكني أخطط لاستخدامها في المستقبل	لا أستخدمها ولا أخطط لاستخدامها
المدونات (مثل: بلوقر، أو وورد بريس)	○	○	○	○	○
ويكي (مثل: وكيبيديا، أو ويكي سبيس)	○	○	○	○	○
الشبكات الاجتماعية (مثل: فيسبوك، لينكدين، أو قوقل بلس)	○	○	○	○	○
المدونات الصغيرة (مثل: تويتر)	○	○	○	○	○
المراسلة الفورية (مثل: واتس اب، أو اللاين)	○	○	○	○	○
محادثات الفيديو (مثل سكايب، أو قوقل هانق اوت)	○	○	○	○	○
مشاركة الوسائط (مثل: اليوتيوب، إنستقرام، أو سناب شات)	○	○	○	○	○

ماهي فوائد استخدام وسائل التواصل الاجتماعي كوسيلة مساعدة في تدريس الطلاب من وجهة نظرك؟ (يمكنك اختيار أكثر من خيار)

تحسن تفاعل الطلاب مع الأستاذ

تحسن تعلم الطلاب

تزيد من رضا الطلاب عن المادة الدراسية

تزيد من تفاعل الطلاب مع بعضهم البعض

يستطيع الأستاذ دمجها بسهولة في المادة الدراسية

تسهل عملية مشاركة المحتوى الدراسي والمعلومات

تحسن قدرات الطلاب على الكتابة

تشجع الطلاب على التعلم التعاوني

لديك فوائد أخرى، أذكره

ماهي المخاطر التي قد تصاحب استخدام وسائل التواصل الاجتماعي في التدريس من وجهة نظرك؟ (يمكنك اختيار أكثر من خيار)

قد تتحول لمنصات لنشر انتقادات ساخرة على أعضاء هيئة التدريس أو الطلاب

التنمر الالكتروني

التتبع والمطاردة الالكترونية

تشتيت الطلاب

نشر محتويات غير قانونية وغير مناسبة في الشبكات الاجتماعية

تبادل التهديدات بين الطلاب

انتهاك للخصوصيات

نشر معلومات سرية

لديك مخاطر أخرى، أذكره

التالي

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القسم الثالث: مدى تقبل أعضاء هيئة التدريس لاستخدام وسائل التواصل الاجتماعي في التدريس

حدد مدى موافقتك مع العبارات التالية. (١=غير موافق بشدة، ٢= غير موافق، ٣=موافق، ٤=موافق بشدة)

موافق بشدة	موافق	غير موافق	غير موافق بشدة	
◯	◯	◯	◯	أخطط مستقبلاً لاستخدام وسائل التواصل الاجتماعي في التدريس.
◯	◯	◯	◯	أنوي استخدام وسائل التواصل الاجتماعي في الفصل الدراسي القادم.
◯	◯	◯	◯	بالتأكيد سوف أقوم بدمج وسائل التواصل الاجتماعي في تدريسي في الفصل الدراسي القادم.
◯	◯	◯	◯	استخدام وسائل التواصل الاجتماعي مفيد لتدعيم تدريسي.
◯	◯	◯	◯	مزايا استخدام وسائل التواصل الاجتماعي في التدريس أكثر من مساوئها.
◯	◯	◯	◯	استخدام وسائل التواصل الاجتماعي فكرة جيدة.
◯	◯	◯	◯	أعتقد بسهولة استخدام وسائل التواصل الاجتماعي.
◯	◯	◯	◯	أعتقد بسهولة دمج وسائل التواصل الاجتماعي مع طريقة تدريسي.
◯	◯	◯	◯	استخدام وسائل التواصل الاجتماعي سوف يساعد الطلاب على تحقيق تعلم أفضل عن الموضوع قيد الدراسة.

○	○	○	○	استخدام وسائل التواصل الاجتماعي في التدريس سوف يزيد من رضا الطلاب عن المادة الدراسية.
○	○	○	○	استخدام وسائل التواصل الاجتماعي سوف يحسن تحصيل الطلاب.
○	○	○	○	استخدام وسائل التواصل الاجتماعي سوف يحسن تقييم الطلاب في نهاية الفصل الدراسي لطريقة تدريس الأستاذ.
○	○	○	○	سوف أقوم بدمج وسائل التواصل الاجتماعي في تدريسي مستقبلاً وذلك من أجل مساعدة الطلاب على تعلم المادة الدراسية بشكل أفضل.
○	○	○	○	الأشخاص الذين لهم تأثير على قراراتي يعتقدون بأني ينبغي أن أقوم بدمج وسائل التواصل الاجتماعي في تدريسي.
○	○	○	○	الأشخاص المهمين بالنسبة لي يعتقدون بأني ينبغي أن أقوم بدمج وسائل التواصل الاجتماعي في تدريسي.
○	○	○	○	قرار استخدام وسائل التواصل الاجتماعي هو قرار خاص بي أنا فقط.
○	○	○	○	أملك المعرفة والقدرة على استخدام وسائل التواصل الاجتماعي.
○	○	○	○	يستخدم الزملاء في الجامعة وسائل التواصل الاجتماعي في تدريسهم.
○	○	○	○	يعتقد الزملاء في الجامعة أني سوف استفيد من استخدام وسائل التواصل الاجتماعي في التدريس.
○	○	○	○	الزملاء والأصدقاء في الجامعة يعتقدون بأنه ينبغي أن استخدم وسائل التواصل الاجتماعي في

تدريسي.

يعتقد رئيسي في الجامعة (رئيس القسم أو عميد الكلية) بأهمية استخدام وسائل التواصل الاجتماعي في التدريس.

| ○ | ○ | ○ | ○ |

يعتقد رئيسي في الجامعة (رئيس القسم أو عميد الكلية) بأنه ينبغي أن استخدم وسائل التواصل الاجتماعي في التدريس.

| ○ | ○ | ○ | ○ |

يعتقد طلابي في الجامعة بأهمية استخدام وسائل التواصل الاجتماعي في تدريسي.

| ○ | ○ | ○ | ○ |

يعتقد طلابي في الجامعة بأنه ينبغي أن استخدم وسائل التواصل الاجتماعي في التدريس.

| ○ | ○ | ○ | ○ |

استخدام وسائل التواصل الاجتماعي يتناسب مع طريقة تدريسي.

| ○ | ○ | ○ | ○ |

استخدام وسائل التواصل الاجتماعي يتلاءم مع المحتوى الذي أقوم بتدريسه.

| ○ | ○ | ○ | ○ |

لدي ما يكفي من الوقت لدمج وسائل التواصل الاجتماعي في التدريس.

| ○ | ○ | ○ | ○ |

وجود سياسة استخدام لوسائل التواصل الاجتماعي سوف يشجعني على دمج وسائل التواصل الاجتماعي في تدريسي.

| ○ | ○ | ○ | ○ |

تقوم الجامعة بتوفير التدريب الكافي الذي يمكنني من دمج وسائل التواصل الاجتماعي في التدريس.

| ○ | ○ | ○ | ○ |

توفر الجامعة شبكة جيدة للأنترنت تمكن من دمج وسائل التواصل الاجتماعي في التدريس.

| ○ | ○ | ○ | ○ |

تقدم الجامعة الدعم الفني الذي قد

○	○	○	○	أحتاجه لدمج وسائل التواصل الاجتماعي في التدريس.
○	○	○	○	أستطيع استخدام وسائل التواصل الاجتماعي بكل أريحية.
○	○	○	○	يمكنني استخدام وسائل التواصل الاجتماعي بكل سهولة ودون مساعدة.
○	○	○	○	لدي معرفة كافية تمكنني من استخدام تقنيات وسائل التواصل الاجتماعي المختلفة.
○	○	○	○	لدي مخاوف من أن يساء استخدام المعلومات التي أقدمها على الإنترنت.
○	○	○	○	لدي مخاوف من أن شخص ما قد يستطيع الحصول على معلوماتي الخاصة على الإنترنت.
○	○	○	○	لدي مخاوف من تقديم أي معلومات على الأنترنت لأنه قد يتم استخدامها بشكل لا يمكن التنبؤ به.

التالي

OHIO
UNIVERSITY

القسم الرابع: سؤال مفتوح

1. فضلا اذكر الأسباب التي دفعتك لاستخدام وسائل التواصل الاجتماعي في تدريسك، في حالة تم استخدامها من قبل. أما في حالة عدم الاستخدام لأي وسيلة من وسائل التواصل الاجتماعي في تدريسك من قبل، فضلاً أذكر المعوقات.

التالي

Appendix H: Exploratory Factor Analysis Before Deleting Item 1

Table 64

Summary of EFA Items and Factors Loadings from Principal Axis Factoring with

Promax Rotation for the Intention and its Antecedents

	Factor			
	1	2	3	4
I intend to use social media technologies within the next semester.	.489			.652
I will add social media technologies to my class next semester.	.505			.479
Social media is useful in my teaching.	.811			
The advantages of using social media outweigh the disadvantages of not using it.	.812			
Using social media is a good idea.	.895			
Using the social media technologies is entirely within my control.			.423	
I have the knowledge and ability to use social media.			.911	
I know enough to use social media technologies.			.653	
People who influence my decision would think that I should use social media in my teaching.		.881		
People who are important to me would think that I should use social media in my teaching.		.921		
I plan to use social media technologies in my classroom.	.810			

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.

Appendix I: Intention Regression After Deleting the Outliers

Table 65

Summary of Regression Analysis for Predictors Explaining the Faculty Members'

Intentions Without the Outliers

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.792[a]	.627	.624	.49897	.627	199.567	3	356	.000

Note: Predictors: (Constant), Subjective_norm, Behavioral_Control, Attitude

Table 66

ANOVA Table of Regression Analysis for Predictors Explaining the Faculty Members'

Intentions Without the Outliers

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	149.060	3	49.687	199.567	.000[b]
	Residual	88.634	356	.249		
	Total	237.694	359			

Note: Predictors: (Constant), Subjective_norm, Behavioral_Control, Attitude

Table 67

Coefficients for Predictors Explaining the Faculty Members' Intentions Without the

Outliers

	Unstandardized Coefficients		Standardized Coefficients			Correlations		
Model	B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
1 (Constant)	-.155	.159		-.974	.331			
Attitude	.802	.048	.680	16.619	.000	.779	.661	.538
Behavioral_Control	.029	.046	.022	.641	.522	.237	.034	.021
Subjective_norm	.177	.041	.169	4.331	.000	.545	.224	.140

Appendix J: Attitude Regression Without the Outliers

Table 68

Summary of Regression Analysis for Predictors Explaining the Faculty Members'

Attitudes Without the Outliers

				Std. Error		Change Statistics			
Model	R	R Square	Adjusted R Square	of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.871[a]	.758	.756	.34087	.758	372.333	3	356	.000

Note: Predictors: (Constant), Compatibility, Easiness, Usefulness

Table 69

ANOVA Table of Regression Analysis for Predictors Explaining the Faculty Members'

Attitude Without the Outliers

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	129.790	3	43.263	372.333	.000[b]
	Residual	41.366	356	.116		
	Total	171.156	359			

Note: Predictors: (Constant), Compatibility, Easiness, Usefulness

Table 70

Coefficients for Predictors Explaining the Faculty Members' Attitudes Without

the Outliers

| Model | Unstandardized Coefficients | | Standardized Coefficients | | | Correlations | | |
	B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
1 (Constant)	.108	.089		1.222	.222			
Easiness	.224	.039	.215	5.712	.000	.722	.290	.149
Usefulness	.546	.048	.507	11.325	.000	.838	.515	.295
Compatibility	.210	.036	.236	5.825	.000	.754	.295	.152

Appendix K: Subjective Norm Regression Without the Outliers

Table 71

Summary of Regression Analysis for Predictors Explaining the Faculty Members'

Subjective Norms Without the Outliers

				Std. Error		Change Statistics				
		R	Adjusted	of the	R Square	F				Sig. F
Model	R	Square	R Square	Estimate	Change	Change	df1	df2		Change
1	.708[a]	.501	.497	.54479	.501	116.931	3	349		.000

Note: Predictors: (Constant), Student_Influence, Superior_Influence, Peer_Influence

Table 72

ANOVA Table of Regression Analysis for Predictors Explaining the Faculty Members'

Subjective Norms Without the Outliers

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	104.112	3	34.704	116.931	.000[b]
	Residual	103.580	349	.297		
	Total	207.693	352			

Note: Predictors: (Constant), Student_Influence, Superior_Influence, Peer_Influence

Table 73

Coefficients for Predictors Explaining the Faculty Members' Subjective Norms

Without the Outliers

| | Unstandardized Coefficients | | Standardized Coefficients | | | Correlations | | |
Model	B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
1 (Constant)	.180	.130		1.387	.166			
Peer_Influence	.401	.069	.330	5.830	.000	.648	.298	.220
Superior_Influence	.218	.053	.227	4.153	.000	.607	.217	.157
Student_Influence	.264	.055	.249	4.810	.000	.600	.249	.182

Appendix L: Perceived Control Without the Outliers

Table 74

Summary of Regression Analysis for Predictors Explaining the Faculty Members'

Behavioral Control Without the Outliers

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.647[a]	.419	.412	.46780	.419	63.734	4	354	.000

Note: Predictors: (Constant), Facilitating_Resources, Privacy, Facilitating_Technology, Self_Efficacy

Table 75

ANOVA Table of Regression Analysis for Predictors Explaining the Faculty Members'

Behavioral Control Without the Outliers

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.788	4	13.947	63.734	.000[b]
	Residual	77.467	354	.219		
	Total	133.255	358			

Note: Predictors: (Constant), Facilitating_Resources, Privacy, Facilitating_Technology, Self_Efficacy

Table 76

Coefficients for Predictors Explaining the Faculty Members' Behavioral Control

Without the Outliers

Model	Unstandardized Coefficients		Standardized Coefficients				Correlations		
	B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
1 (Constant)	1.272	.140		9.101	.000			
Self_Efficacy	.510	.041	.618	12.567	.000	.626	.555	.509
Privacy	.111	.030	.151	3.681	.000	.169	.192	.149
Facilitating_T	-.070	.040	-.084	-1.755	.080	.252	-.093	-.07
Facilitating_R	.066	.042	.077	1.566	.118	.352	.083	.063

Appendix M: Independent T-Test for Gender Across all 14 Constructs

Table 77

Independent T-Tests to Test Gender Influence on all 14 Constructs in the DTPB

Framework

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Attitude	Equal variances assumed	.742	.390	.628	359	.531	.04936	.07864	-.10529	.20402
	Equal variances not assumed			.602	194.371	.548	.04936	.08197	-.11231	.21104
Behavioral_Control	Equal variances assumed	.424	.515	1.620	359	.106	.11251	.06945	-.02407	.24909
	Equal variances not assumed			1.591	205.083	.113	.11251	.07071	-.02690	.25192
Subjective_norm	Equal variances assumed	.324	.569	.586	359	.558	.05223	.08907	-.12294	.22740
	Equal variances not assumed			.582	209.826	.561	.05223	.08980	-.12481	.22926
Easiness	Equal variances assumed	2.102	.148	.348	359	.728	.02630	.07562	-.12242	.17502
	Equal variances not assumed			.330	189.742	.742	.02630	.07969	-.13089	.18349
Usefulness	Equal variances assumed	.132	.716	-.011	359	.992	-.00077	.07298	-.14429	.14276
	Equal variances not assumed			-.010	212.341	.992	-.00077	.07321	-.14508	.14355
Compatibility	Equal variances assumed	.015	.901	.591	359	.555	.05235	.08854	-.12177	.22647
	Equal variances not assumed			.585	208.445	.559	.05235	.08952	-.12412	.22882
Peer_Influence	Equal variances assumed	.983	.322	-.660	359	.509	-.04929	.07465	-.19609	.09751
	Equal variances not assumed			-.649	205.030	.517	-.04929	.07601	-.19914	.10056
Superior_Influence	Equal variances assumed	.192	.661	-.358	359	.721	-.03320	.09286	-.21581	.14940
	Equal variances not assumed			-.365	224.691	.716	-.03320	.09099	-.21251	.14611
Student_Influence	Equal variances assumed	.375	.540	.283	359	.777	.02377	.08406	-.14154	.18909
	Equal variances not assumed			.286	220.380	.775	.02377	.08303	-.13987	.18742
Self_Efficacy	Equal variances assumed	.008	.930	1.241	359	.215	.10530	.08481	-.06150	.27209
	Equal variances not assumed			1.228	208.508	.221	.10530	.08574	-.06373	.27432
Privacy	Equal variances assumed	1.043	.308	-.080	359	.937	-.00754	.09476	-.19389	.17881
	Equal variances not assumed			-.078	204.291	.938	-.00754	.09663	-.19807	.18299
Facilitating_Technology	Equal variances assumed	.059	.809	-.182	359	.855	-.01538	.08429	-.18116	.15039
	Equal variances not assumed			-.184	219.523	.854	-.01538	.08340	-.17974	.14898
Facilitating_Resources	Equal variances assumed	.120	.729	.647	359	.518	.05319	.08216	-.10838	.21477
	Equal variances not assumed			.646	212.888	.519	.05319	.08233	-.10909	.21548

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