SAUDI STUDENTS' ATTITUDES TOWARD USING SOCIAL MEDIA TO SUPPORT LEARNING

By

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Submitted to the graduate degree program in Educational Leadership and Policy Studies and the Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the degree of Doctor of Philosophy

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Date Approved: 04-30-2015

Abstract

The Pew Research Center (2015) reported that 74% of the Internet users use social networking sites worldwide. Studies have provided evidence that social media is promising for increasing collaboration and cooperation in project –based learning. However, few empirical studies investigate the use of social media in educational settings, especially in the Middle East. This study investigates factors and barriers affecting the attitudes toward using social media in one of Saudi Arabia's universities, King Abdul-Aziz University, Jeddah, with the intent of understanding when and how social media can best be used to support learning. The hypothesized model was developed through the social learning theories of Bandura and Vygotsky, the Technology Acceptance Model of Davis, and the Diffusion of Innovation model of Rogers. Five hundred ten students (214 male and 296 female) participated in an electronic survey, and its findings reveal the students have positive attitudes (M= 3.99, SD=.76) towards using social media to support learning. The most frequently used tool by students was WhatsApp (M= 4.60, SD=.88), with which students have the highest experience (M= 4.58, SD=.84). Students reported facing two major barriers when utilizing social media which are some of the social media contents are against the students' religion (M= 4.12, SD= 1.1) and concerns about privacy and security issues related to the usage of social media (M= 3.72, SD=1.19). Only five predictors were significant determinants of attitudes of the students including: perceived ease of use, perceived usefulness, subjective norms, experience with Skype, and age. There was a significant relationship between the overall attitudes of the students and their intentions, with r(508)= .67, p=.00. As social media tools continue to attract students' attention, more research on developing effective instructional methods for using social media to support students' learning, with consideration of cultural and religious aspects, is needed.

Dedication

I dedicate this work to:

Ahmad Aifan

My beloved father, the source of strength and love

May Allah forgive you and grant you the highest Paradise

My beloved mother,

the source of my happiness and optimism

Thank you for your love, supplications, unlimited support, and encouragement, I love you.

Osamah Al-Ghamdi,

My husband, the source of my endless inspiration and strength

Thank you for your unlimited support, patience, sacrifices, and encouragement, which inspire me to make this endeavor possible.

My wonderful children,

Mohammad and Ahmad

Thank you for your love which always inspires me to work with hope, joy and enthusiasm

My beloved mother and father-in-law

Thank you for your prayers, encouragement, patience, and support.

My beloved sisters and brothers,

Thank you for your prayers, love, encouragement, and support.

May Allah protect you all and grant you with great faith, health, and success.

Acknowledgments

In the Name of Allah, the Beneficent, the Merciful

All praise and thanks are due to Allah, the Lord of the universe for his blessing, guidance, and help who provides me with strength, ability, and patience to complete this study. Peace and blessing be upon our prophet Mohammad, the honest and the faithful. I thank Allah for giving me the health, patience, and ability to complete this work and earn the PhD degree. This endeavor can't be possible without the guidance and help of Allah.

I would express my great gratitude, love, sincerity, and appreciation to my father, Ahmad Aifan, who passed away in 2007, for raising me and teaching me the best morals and cultivating the perfect norms in my heart and life. I wish that you are alive to stand by me this day as you have dreamed to see me as a doctoral student and great mother. May Allah grant you with his forgiveness and mercy.

A great gratitude, love, and sincerity, and appreciation go to my mother for her unlimited support, encouragement, and supplications with which she provided me during my journey. Your patience, sad feelings, and tragic emotions regarding me being far away from you kept me always eager to achieve my great goal and come back to you with my unique accomplishment to replace all of your pains with cheerfulness and pleasure.

Love, sincerity, and appreciation go to my family; my husband, Osamah, and lovely children, for their love, encouragement, and sacrifices. You always bring joy, hope, and happiness to me. Thank you my husband for the efforts and sacrifices that you provided me with during my entire academic journey. I would also like to thank my wonderful children, Mohammad and Ahmad, for realizing how important the time was for me to work and finish this endeavor and make it possible.

A special appreciation and thanks go to my father-in-law, Mohammed Al-Ghamdi, who was encouraging and supporting me through my academic journey. You were always with me instead of my father, your support, prayers, and love relieved this painful loss.

Gratitude and thanks go to my mother-in-Law, for her support, supplications, and patience with which she provided me and my family to accomplish this academic degree and dream.

I would like to express my special gratefulness, appreciation, and gratitude to my chair and advisor, Dr. Ron Aust, for his guidance, patience, dedication, suggestions, and encouragement. You were always supporting me during my master's and doctoral journey to complete this endeavor. Thank you so much for everything you have provided me with. I am also extremely grateful to my doctoral dissertation committee members, Dr. Branham Richard, Dr. Suzanne Rice, Dr. Bruce Frey, Thomas DeLuca, and Dr. Young-Jin Lee, for their comments, suggestions, and support while working on my dissertation. A special gratefulness and thanks for Dr. Richard, who supported me a lot with advice, books, suggestions, encouragement, and patience all the time during my academic journey. Also, a special thanks and appreciation go to Dr. Frey who provides me with much of his time to giving advice and suggestions to the statistical analysis part of my dissertation. A special gratefulness and thanks go to Dr. Rice for her patience, suggestions, encouragement, and support during my academic journey.

I would also express my gratitude and thanks for my brothers, sisters. I especially thank them for their prayers and encouragement through my study journey. A special gratefulness and thanks for my sister, Saedah, at Montclair University, for her support, help, care, and love and her husband, Ahmad Al-Ghamdi; at the University of Rutgers, for his care, support, and help in translating the survey questions to English and reviewing both versions of the questionnaire. May Allah protect you all and bless you with faith, health, and happiness.

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Chapter 1

Introduction

Background

Social media technologies have not only substantially changed the way organizations, communities, and individuals communicate and socialize with each other, but they have also changed the way people learn, share information, exchange knowledge, and create new ideas. Usage of these emerging technologies is growing rapidly among the present generation of students. Because the net generation has grown up with web 2.0 social media technologies, these tools have tremendous popularity in students' social lives, and yet they become digital natives. Prensky (2006) stated that:

> 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. Our students as, digital natives, will continue to evolve and change so rapidly that we won't be able to keep up (p. 9).

Educators recognize the power of social media to transform learning, and they are now integrating these online tools in their instructions. The features of social media complement the constructive philosophy of teaching and learning that allows learners to create, co-create and share knowledge with global audiences beyond classroom walls (Seo, 2013). However, as social media tools have the opportunity to change education, many institutions still wonder how to adapt to these tools (Barnes & Tynan, 2007). Therefore, understanding students' attitudes and expectations regarding utilizing social

media technologies to support learning could help instructors gain better vision of how these digital natives are using such tools for learning purposes.

Social media technologies are part of the Internet's web-based applications and software, which help learners to learn, participate, share their information, and collaborate with others through digital connections. Social media is a 21st century term used to broadly define a variety of networked tools or technologies that emphasize the social aspects of the Internet as a channel for communication, collaboration, and creative expression, and it is often interchangeable with the terms web 2.0 and social software (Dabbagh & Reo, 2011 b). According to Shirky (2003), social software is software that supports group interaction. It is the scope of application, that enables social connections, groups' interactions, shared web spaces for collaboration, and information exchange in web based environments, according to Bragg (2005).

In the educational field, where information technology merges with educational technology through the learning process, emerging technologies have helped learners to enhance skills and to develop independence because these tools avoid physical constraints and time conflicts. The growth of electronic learning environments-where students can learn through using digital technologies and the Internet, allows students the opportunities to engage in lifelong and flexible learning, communicate and connect with others who live far away, and be open minded and self-directed learners.

Most recently, the incorporation of web 2.0 technologies and online social media has emerged as the most promising tool for reinventing public education (Seo, 2013). One major motivation to use web 2.0 social media in education is that many of these tools are already familiar to K-12 students as they are already being used outside the

classroom for a verity of social networking and communication purposes (Project Tomorrow, 2010 as cited in Seo, 2013). These emerging tools have positively impacted the educational field and improved learning skills of students.

This positive impact and improved learned has occurred because the new tools allow learners to get information at any time, provide reflections, and share their information and experiences with others. Additionally, these tools help students to learn collaboratively with one another, exchange their opinions and thoughts, and participate with others at any location. According to the New London Group (1996), social media and web 2.0 have promise to bridge the gap between home and schools, raise academic performance, and to level the playing field for all students, regardless of ethnicity or income level.

However, because digital learners are already in online and virtual ecologies spending much of their time using social media technologies for different purposes, it is important that educational institutions develop their curricula and programs to keep up-to-date with the new technology era requirements in order to increase learning efficiency. According to Greenhow, Hughes, and Robelia (2009), social media and web 2.0 tools have the potential to enhance literacy and learning across diverse students populations, and these researchers call for the use of interactive social media as a means of preparing students for the 21st century.

Social media technologies have become tools in the hands of the present generation of students, net savvy. This indicates how crucial it is to investigate students' attitudes toward utilizing social media for learning purposes, how they perceive the educational values of such tools, and what barriers the students face when using social

media for learning. This investigation will help instructors understand how students' learning practices and experiences are connected to emerging technologies such as social media. Lohnes and Kinzer (2007) argued that "Faculty needs to have greater perspectives of the Net Generation technology expertise and how student learning is connected with technology; this is a vital component for higher education" (p.7).

Investigating how social media have changed the culture of education and learning in a conservative society such as Saudi Arabia is an extension of this investigation. Therefore, this study aims to understand Saudi students' attitudes towards using social media to support their learning and explore factors and barriers affecting students' adoption of such tools at King Abdul-Aziz University, one of the Saudi Arabian universities.

What is Social Media?

Kaplan and Haenlin (2010) define social media as follows:

> 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. It is a medium for social interaction as a super-set beyond social communication enabled by ubiquitously accessible and scalable communication techniques. (p.63)

The term "social media" interchanges with two other terms respectively which are "social software" and "web 2.0.". Bragg (2005) defines social software as the scope of applications, which enables social connections, groups interactions, shared web spaces for collaboration, and information exchange in web based environments. The term of social software is the major component of web 2.0. Alexander (2006) defines social

software as including blogs, wikis, trackback, podcasting, videoblogs, and social networking.

Social web 2.0 is a stage of the World Wide Web, where learning is characterized as a community of practice in which people interact and share their interests and learn together and develop rich resources. Users are empowered to search, create, and collaborate in order to fulfill intrinsic needs to learn new information, according to Thalheimer, 2008; Ferretti et al., 2009; and Renner, 2006.

Web 2.0 is a term that was first used in 2004, and it describes a new way of utilizing the World Wide Web as a platform where content and applications are not created and published by individuals alone, but are instead continuously modified by all users in collaboration (Kaplan & Haenlin, 2010). Dohn (2009) refers to web 2.0 as "certain forms of activities or practice…not a binary function, but rather a question degree" (p. 345). Alexander (2006) defines web 2.0 as a series of tools, utilities, websites, and applications based around social software and enhanced by the social connectivity of the World Wide Web. He argues that a key feature of web 2.0 is user – driven, collaborative content provided through openness and the sharing of services and platforms. According to Seo (2013), "Pictures, audio, videos, and hyperlinks to other online resources make web 2.0 into a network of multiple information dissemination that goes beyond just text. Knowledge is stored, retrieved, created, or amended digitally online in a variety of media forms easily found by a user (p. 47)." Silver (2008) concluded that the concept of web 2.0 has led to the development and popularity of some web culture communities which include social-networking sites, video sharing, blogs, and wikis.

However, there are many classifications and types of tools considered to be social media technologies, which facilitate the social factor and depend on the users' productions and participations. Kaplan and Haenlin (2010) classify social media into six different forms. These forms including: projects produced collaboratively by users (e.g. Wikipedia); Social Networking Sites (e.g. Facebook); Content Communities (e.g. YouTube); Blogs and Microblogs (e.g. Twitter); Virtual Social Worlds (e.g. Second Life); and Virtual Game Worlds (e.g. World of Warcraft).

Social media tools have changed the ways people learn, acquire information, build knowledge, and participate in creating new and different genres of learning practices. Learning through incorporating social media technologies into the learning process is called e-learning web 2.0, which is the second generation of electronic learning. E- learning 2.0 is defined as learning through digital connections and peer collaboration, enhanced by technologies driving web 2.0, according to Elsayed (2011, p. 5). The Egyptian National Council (2008) defined electronic learning web 2.0 as learning that supports students with the social aspects of the learning process through using social software that enhances social connection and collaboration. It is a process in which information and media are shared by individuals and combined or built to create new forms, concepts, ideas, and services (Downes, 2005).

Why Social Media is Important?

In this era of new technologies and its subsequent knowledge explosion and information flow, people need to keep up-to-date with new developments that apply to their careers and interests. The revolution of the Internet has played a significant role in distributing and transferring information quickly from one place to another. In the

presence of the Internet, information has become available at any time, allowing people to acquire information related to the social, political, economic, and educational aspects of their lives.

Online and mobile web-based technologies, such as social media, have played significant roles in providing people with ubiquitously accessible communications and in helping them to connect and establish relationships with others. Technology also impacts learning as it facilitates learning anytime and anywhere through different applications. This technological revolution has led to the emergence of new and flexible learning practices for all people as it allows different styles with numerous visual and audio elements with many effects and backgrounds. Lo (2013) states, "YouTube allows users to share their videos and comments and is becoming a place where people find various learning opportunities" (p. 24).

Teaching with technology tools and their features can make learning more interesting and help students to be more engaged in technology learning environments than in the traditional ones. Collins and Halverson (2009) conclude that in the presence of new technologies, education has been structured around the idea of lifelong learning where students will act as consumers of knowledge through the use of Internet and technologies and move away from highly structured schooling institutions.

Prensky (2006) argues that since educators have moved into the 21st century, it is now time for education leaders to rise above the daily grind and observe the new landscape that is emerging. He concludes that today students are native speakers of technology, fluent in the digital language of computers, video games, and the Internet.

Students, as digital natives, will continue to develop and change so rapidly that teachers will not be able to keep up, according to Prensky (2006).

Understanding factors and barriers that influence students' attitudes towards adopting social media for learning purposes is important to help them effectively utilize such tools to support their learning. According to Greenhow et al. (2009), web 2.0 applications are capable of offering learning experiences that are otherwise impossible; therefore, research efforts should focus on how learners utilize these technologies for learning and how these applications provide equal access to all willing learners.

Educational System in Saudi Arabia

According to the Saudi Cultural Mission to the United States of America (2015), Saudi educational policy aims to support education in general and higher education, particularly in order to ensure that education meets the religious, economic, and social needs of the country as well as to eliminate illiteracy among Saudi adults. However, the Ministry of Education sets fundamental standards for the educational system for both public and private schools and oversees special education for handicapped. Additionally, the General Presidency for Girls' Education was dissolved early in 2003, and its functions taken over by the Ministry of Education which administers the girls' schools and colleges, supervise kindergartens and nursery schools, and sponsors literacy programs for females.

The Ministry of Higher Education was established in 1975 to implement the Saudi Arabia's higher education policy in the rapidly expanding sphere of post-secondary education. Prior to 1975, higher education was under the supervision and administration of the Ministry of Education.

The General Organization for Technical Education and Vocational Training (GOTEVT) was established in 1980 to coordinate and implement Saudi Arabia's manpower development plans and supervise all related training centers and institutes.

Higher Education in Saudi Arabia

In 1975, part of the Ministry of Education become a separate entity and was renamed the Ministry of Higher Education with the purpose of dealing exclusively with higher education (Ministry of Higher Education, 2015). Over the last five decades, higher education in Saudi Arabia has undergone significant improvements. According to the Ministry of Higher Education (2014), higher education has expanded to include the following:

- 24 Government Universities
- 18 Primary Teacher's Colleges for men
- 80 Primary Teacher's Colleges for women
- 37 Colleges and Institutes for health
- 12 Technical Colleges
- 29 Private colleges and Universities

Stages of higher education at the Saudi universities include offering Bachelor's, Master's, and PhD degrees. The Ministry of Higher Education supervises the execution of Saudi Arabia's policy in the field of higher education, and it supervises the universities through a University Council. In Saudi education, most universities accept both males and females except the University of Petroleum and Minerals and the Islamic University; these two universities admit men only. All subjects are taught in Arabic except in the

technological and science fields where English is used as the medium of instruction. Twenty-four government universities in addition to the other twenty-four private universities and colleges are distributed in all regions of Saudi Arabia.

Universities in Saudi Arabia

Over the last six years, the number of participants in Saudi universities has increased. According to the Saudi Ministry of Higher Education (2015), government universities have 54,673 faculty members and 1,165,091 students; private universities and colleges have 3,512 faculty members and 75,119 students. For example, King Abdul-Aziz University breaks down as follows: 412 Professors, 852 Associate Professors, 2,037 Assistant Professors, 1,026 Lecturer, 2426 Teaching Assistants, 275 Teachers, and 44 other staff. The total of faculty members at King Abdul-Aziz University is 7,072 faculty, while the total of students studying there is 82,152 male and female student (Higher Education in Saudi Arabia, 2015).

King Abdul-Aziz University at Jeddah

According to the Ministry of Higher Education, About King Abdul-Aziz University, (2015), King Abdul-Aziz University was established in 1976; it carries the name of the establisher of Saudi Arabia. King Abdul-Aziz University and it includes two separate campuses according to the Islamic regulations: one for males and another for females. Each of these campuses is provided with cultural, recreational, and athletic facilities. Additionally, the campus has a big library equipped with up to date technology to serve students and the teaching staff. Within four decades, the university has become an outstanding higher education institution at the local and international level. This

university offers educational programs for preparing undergraduates and graduates for jobs that cope with the changing needs of the community.

King Abdul-Aziz University is considered a pioneer in offering higher education to Saudi females; the female and male sections were inaugurated in the same year. In addition, the university not only has the regular students program, but it also has an external program (Entsab) to make it easy for all students to get higher education. It also established the Deanship of Distance Education in order to provide development in learning and teaching technology.

King Abdul-Aziz University involves 24 colleges, 15 of them on campus and 9 off campus. These colleges include:

1. College of Arts and Human Sciences
2. College of Meteorology and Environment
3. College of Economic and Administration
4. College of Home Economics
5. College of Applied Medical Sciences
6. College of Business at Rabigh
7. College of Environmental Design
8. College of Engineering at Rabigh
9. Jeddah Community College
10. College of Medicine at Rabigh
11. College of Arts and Human Studies Girls Branch
12. College of Computer and Information Technology at Rabigh
13. College of Computer and Information Technology
15. College of Engineering
16. College of Science
17. College of Earth Sciences
18. College of Marine Sciences
19. College of Pharmacy
20. College of Medical Sciences
21. College of Dentistry
22. College of Arts and Design
23. College of Medicine
24. Girls College of Sciences

14. College of Education at King Abdul-Aziz University

Electronic Learning in Saudi Arabia

E-learning in Saudi Arabia is improving in order to keep up to date with the influx of merging technologies in the world. Several projects have been established by the Saudi Ministry of Higher Education to foster a more perfect system of E-learning among Saudi universities. According to the University of King Abdul-Aziz (2014), the Deanship of Electronic Learning and Distance Education has developed several electronic services that facilitate electronic learning and overcome barriers of demographic distances. One of these services is the Electronic Management Education System (EMES).

EMES is an electronic system that manages the distant learning process. EMES aims to facilitate interaction between students and instructors. This system can be improved continuously, is easy to use, is provided in Arabic, has assessment methods, provides communication tools between the students and the instructors, uses new technologies as educational tools, improves the independent- learning of the students, and enables instructors to manage and monitor the learning process, according to King Abdul-Aziz University, Deanship of Electronic Learning and Distance Education (2014).

EMES also provides other services through this system such as instruction (the subject matter) for students via the Internet, lectures in distance through electronic classes, electronic discussions between instructors and students, posting assignments, helping students receive solutions and electronic feedback, providing tests for practices or class tests, and allowing distant students to post their projects and research in the presence of both the students and their instructors online, according to the Deanship of Electronic Learning and Distance Education (2014), King Abdul-Aziz University.

Another electronic service that the Deanship of Electronic learning and Distance Education provides is the CENTRA system: the Virtual Classrooms System. The Deanship of Electronic Learning and Distance Education (2014) describes the virtual classroom CENTRA system as follows:

> Virtual classes resemble the traditional classes and are used to conduct synchronized lectures. Students and their instructors are present in these lectures at the same time. The system consists of all the needed elements and features (application sharing, whiteboard, hand raising...etc.) that insure the delivery of a successful lecture (Deanship for e-learning and Distance Education, Projects, 2014).

This indicates that the CENTRA system is a tool that assists in providing lectures online via the Internet. This system consists of virtual smart classrooms that provide important components of interaction between both learners and instructors. The CENTRA system is considered one of the many different techniques in distant, open, and interactive learning. However, lectures via the virtual classrooms depend on interaction between learners and instructors whether through an internal web called LAN or via the Internet. This interaction is supported with voice and graphics (videos plus an interactive board). It also provides tools for managing and controlling the learning process. In addition, these virtual classrooms offer tools for indirect interaction between instructors and learners through discussion groups and electronic mail (Deanship for e-learning and Distance Education, Projects, 2014).

The CENTRA system also facilitates dual and multiple connections among students and instructors. It supports interaction between small groups of students, is

equipped with vocal and visual tools to facilitate direct interaction, and has recording tools for assessments and evaluations. Other services that the CENTRA system provides include: live virtual classes, real-time interaction, blended learning, rich multimedia, application sharing, voice-over IP, teleconferencing and videos, global and multi-lingual support, and live electronic meetings (The Deanship of Electronic Learning and Distance Education at King Abdul Aziz University, 2014).

The Learning Management System (BlackBoard) is another system used at King Abdul-Aziz University. According to the Deanship of Electronic Learning and Distance Education (2014), the Learning Management System (Blackboard) is an integrated e-learning solution that supports the learning process through a combination of synchronous and a-synchronous online instructions and communication. Using this system, instructors carry out the courses and lectures via multimedia usage (text, images, audio, video, or animation). Students come together to browse through the content on a secure site according to their needs. Students also are free to communicate with each other without restriction of time and place via the various communication tools (e-mail, forums, etc.) or via the virtual classes that can be operated from any smart device (Deanship for e-learning and Distance Education, Learning Management System, 2014).

Theoretical Framework

To frame this study and to describe the variables and the ideology of important elements, several theories and models were used, including the Social Learning Theories, Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), and the Theory of Diffusion of Innovations (TDI).

Theories of social learning. The social learning theory of Bandura (1977) emphasizes the importance of observing and modeling behaviors, attitudes, and emotional reactions of others. Bandura believes that behavior is learned from the environment through the process of observational learning. Bandura (1977) states:

> Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action (p. 22).

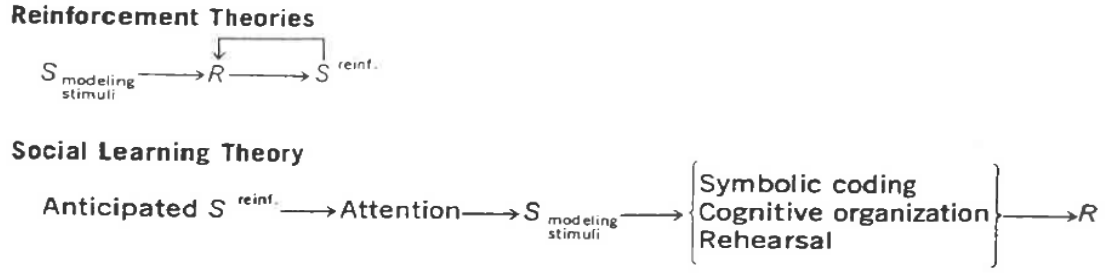
Social learning theories explain human behavior in terms of continuous reciprocal interaction between cognitive, behavioral, and environmental influences. Therefore, human behaviors are affected by observation and by direct experience. Thus, these theories emphasize that behaviors result from both the social interaction of people and their environments. Bandura (1977) states:

> Behavior and complex learning must be explained in terms of a continuous reciprocal interaction of personal environmental determinants…virtually all learning phenomena resulting from direct experience occurs on vicarious basis by observing other people's behavior and its consequences for them (p. 11).

The component processes underlying observational learning, according to Bandura, are (1) Attention, including modeled events (distinctiveness, affective valence, complexity, prevalence, functional value) and observer characteristics (sensory capacities, arousal level, perceptual set, past reinforcement); (2) Retention, including symbolic coding, cognitive organization, symbolic rehearsal, motor rehearsal; (3) Motor

Reproduction, including physical capabilities, self-observation of reproduction, accuracy of feedback; and (4) Motivation, including external, vicarious and self reinforcement (See Figure 1).

Figure 1. Role of Reinforcement in Observational Learning



Source: Bandura (1977), Social Learning Theory

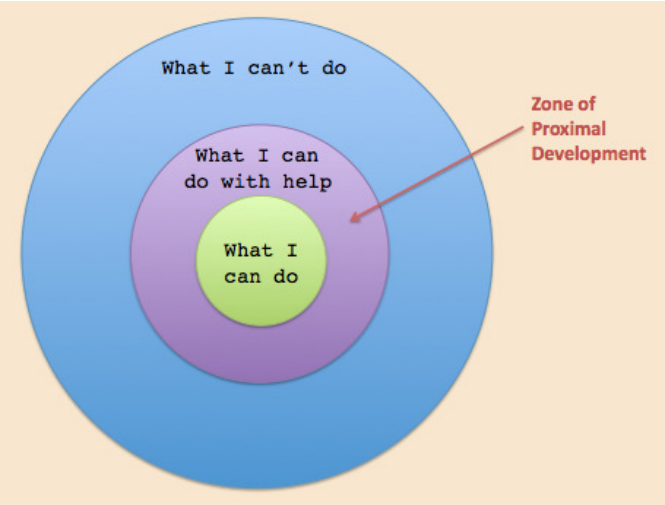
Bandura's work is related to the theories of Vygotsky (1962, 1978) that also emphasize the central role of social learning. Vygotsky's social development theory, complementary to Bandura's work, is a key component of the sociocultural learning theory. Vygotsky (1962) defines learning as inherently a social activity that takes place through social interaction. He believes that full cognitive development requires social interaction. Thus, social interaction plays a fundamental role in the development of cognition. Vygotsky (1978) states:

> Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals (p. 57).

The second aspect of Vygotsky's theory is the idea that the potential for cognitive development depends upon the "zone of proximal development" (ZPD), which is a level

of development attained when children engage in social behavior. Full development of the ZPD depends upon full social interaction. The range of skill that can be developed with adult guidance or peer collaboration exceeds what can be attained alone (See Figure2).

Figure 2. Vygotsky's Zone of Proximate Development (ZPD)



Source: Vygotsky (1978)

Vygotsky's theory (1978) is a key component of Lave's Situated Learning Theory as well. Lave (1988) argues that learning as it normally occurs is a function of the activity, context and culture in which it is situated. This contrasts with most classroom learning activities that involve knowledge that can be abstract and out of context. Social interaction, as Lave argues, is a critical component of situated learning -- learners become involved in a "community of practice" which embodies certain beliefs and behaviors to be acquired. As beginners or newcomers move from the periphery of this community to its center, they become more active and engaged within the culture and hence assume the

role of expert or old-timer. Furthermore, situated learning is usually unintentional rather than deliberate. These ideas are what Lave and Wenger (1990) call the process of "legitimate peripheral participation."

Other researchers have further developed the theory of situated learning. Brown, Collins and Duguid (1989) emphasize the idea of cognitive apprenticeship. Cognitive apprenticeship supports learning in a domain by enabling students to acquire, develop and use cognitive tools in authentic domain activity. Brown et al. (1989) conclude that learning, both outside and inside school, advances through collaborative social interaction and the social construction of knowledge.

Bandura's (1977) and Vygotsky's (1962, 1987) social learning theories are applied widely to understand social aspects of learning. As Bandura and Vygotsky believe that all learning is social, for this current study, the researcher applies theories of social learning to test Saudi students' willingness to learn socially utilizing social media technologies in order to support their learning.

Theory of Reasoned Action (TRA). Theory of Reasoned Action (TRA) was developed by Fishbein and Ajzen in 1975, and is concerned with the determinants of intended behaviors. In social psychology literature, TRA defines relationships between beliefs, attitudes, norms, intentions, and behavior. When TRA is applied to explain the use of adoption behavior, it embraces four fundamental concepts: actual behavior, behavioral intention, attitude, and subjective norm.

According to TRA, as cited in Masrom and Hussein (2008), "An individual's behavior such as use or rejection of technology is determined by one's intention to perform the behavior, and this intention is influenced jointly by the individual's attitude

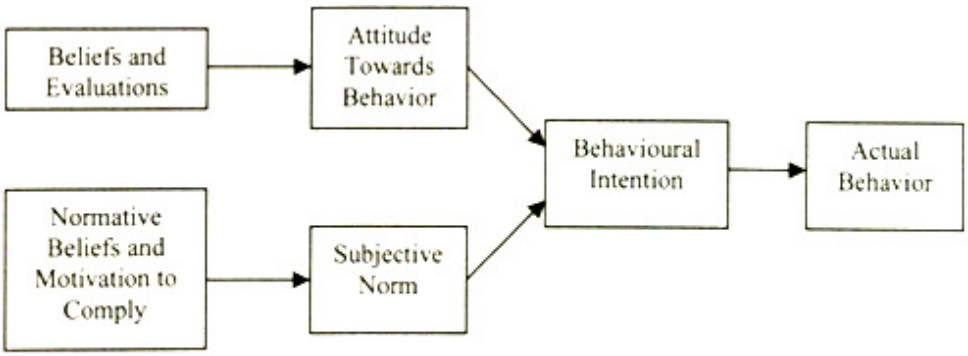
and subjective norm"(p.8). Behavioral intention (BI) is defined as a measure of the strength of one intention to perform a specific behavior especially the use of an information system, according to Masrom and Hussein (2008). Hartshorne and Ajjan (2008) argue that behavioral intention is the most important predictor of actual behavior when the user has formed a stable intention to take a specific action. This indicates that intentions to perform a behavior are a function of two basic determinants, one personal in nature (attitude towards the behavior), and the other reflecting social influence (subjective norm) (See Figure 3).

According to TRA, as cited in Masrom and Hussein (2008), "Attitude toward a behavior is determined by beliefs about the consequences of the behavior and the affective evaluation of those consequences." (p8) On the other hand, subjective norm is explaining how a person's willingness to perform a specific behavior is influenced, based on whether people who are important to that person think he or she think should or should not perform this behavior. Fishbein and Ajzen, (1980) argue that subjective norm is defined as a person's perception of the suggestions made by those people most important to him or her as to whether a particular behavior should or should not be performed. Attitude and subjective norm is influenced by sets of beliefs (Ajzen, 1991).

TRA, according to Masrom and Hussein (2008), can be summarized by the following equation:

Behavioral Intention= Attitude Towards a Behavior + Subjective Norm

Figure 3. Theory of Reasoned Action



Source: Davis et al. (1989)

Variables Definitions

Behavioral Intention (BI): A measure of the strength of one's intention to perform a specified behavior, which is the use of an information system (Masrom & Hussein, 2008).

Attitude towards Behavior (ATT): An individual's positive or negative feelings (evaluative affect) about performing the target behavior. Attitude is determined through an assessment of one's beliefs regarding the consequences arising from a behavior and evaluation of the desirability of these consequences (Masrom & Hussein, 2008).

Subjective Norm (SN): An individual's perception of whether or not people important to the individual think the behavior should be performed. The contribution of the opinion of any given referent is weighted by the motivation that an individual has to comply with the wishes of that referent (Masrom & Hussein, 2008).

As TRA has proven successful to many areas, other models have been drawn from it. One of these models is the Technology Acceptance Model (TAM) by Davis (1989), from which the current study hypotheses were postulated.

Technology Acceptance Model (TAM). TAM, developed by Davis in 1989, is an information systems theory that models how users come to accept and use a computer-based technology. This theory is one of the influential extensions of Ajzen and Fishbein's (1980) TRA and is based on principles originally articulated by Ajzen and Fishbein. TAM suggests that when users are presented with a new software package, a number of factors influence their decision about how and when they will use it (Masrom & Hussein, 2008). TAM states, "Individual's adoption of information technology depends on two main factors, which are Perceived Usefulness (PU) and Perceived Ease-of Use (PEO) of the technology".

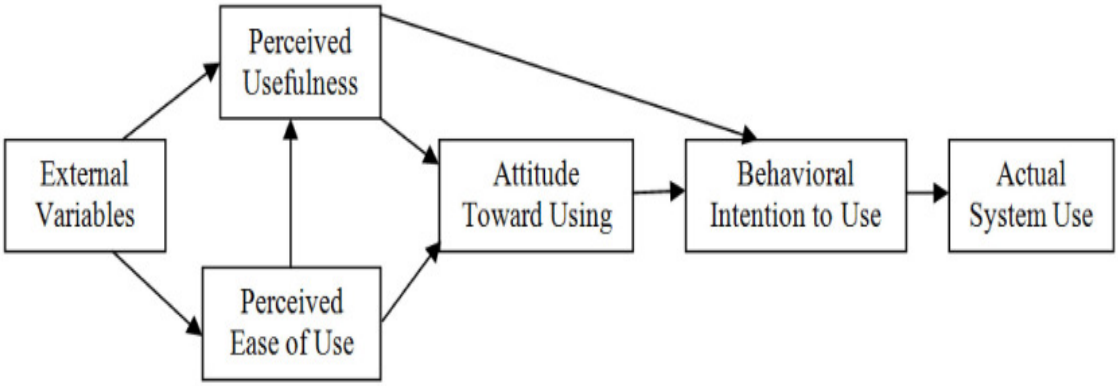
PU is "the degree to which an individual believes that using a particular system would enhance his/her job performance" (Davis 1989, p. 320), whereas perceived ease of use is defined as "the degree to which an individual believes that using a particular system would be free of real and mental efforts" (Davis 1989, p. 323). Davis argues that perceived usefulness and perceived ease of use determine the user's intention to use the system or the technology.

According to TAM, the behavioral intention to use the system is determined directly by the person's attitude towards using the system and the subjective probability that using a specific application will increase his or her job performance (PU). Attitude and PU also depend on the degree to which the user expects a system to be free of effort (PEOU). Thus, PU and PEOU affect the use of a system, according to Masrom and Hussein (2008).

In the TAM model, attitude towards a behavior (using the system) is central feature of TAM. According to Masrom and Hussein (2008), TAM believes that when

people perceive any technology as easy to use and useful they would hold positive attitudes toward this technology. These positive attitudes will result in accepting and using this technology (e.g., social media technologies) (p. 52) (See Figure 4 TAM).

Figure 4. Technology Acceptance Model (TAM)



Source: Davis (1989)

Masrom and Hussein (2008) argue that both TRA and TAM have strong behavioral elements, and assume that when someone forms an intention to act, they will be free to act without limitations. However, Bagozzi, Davis, and Warshaw (1992) argue that there will be many constraints to adopt new technologies such as limited ability, time constraints, environmental constraints, or unconscious habits that will limit the freedom to act.

However, the TRA and TAM have been applied across a wide variety of domains and proven successful to predict and explain people's behavior and attitudes toward a specific behavior such as people's willingness to adopt new invention. Thus, the researcher for this study applied both theories, TRA and TAM, to test students' intentions and attitudes to adopt social media in order to support their learning at King Abdul-Aziz University, Jeddah.

Variable Definitions

Perceived Usefulness (PU): The degree to which a person believes that using a particular system would enhance his or her job performance.

Perceived Ease of Use (PEOU): The degree to which a person believes that using particular system would be free from effort.

Behavioral Intention: A measure of the strength of one's intention to perform a specific behavior, that is, use an information system.

Subjective Norm (SN): An individual's perception of whether or not people important to the individual think that the behavior should be performed. The contribution of the opinion of any given referent is weighted by the motivation that an individual has to comply with the wishes of that referent (Masrom & Hussein, 2008).

Theory of Planned Behavior (TPB). TPB was developed by Ajzen (1985) to understand people's intentions to engage in a given behavior. The TPB is an extension of the TRA (Fishbein & Ajzen, 1980). TPB assumes that a user's intention to use a technology is a rational decision based on personal and social variables. The personal variable, attitude toward behavior, reflects a user's positive or negative personal beliefs regarding the use of technology in producing favorable outcomes. The social variable, subjective norm, refers to a use's perception of whether or not significant others believe they should or should not use technology within specific environments, such as learning or teaching environments.

TPB focuses on a person's intention to perform a particular behavior, such as students' adoption of web 2.0 social media to support their learning. This theory suggests that the extent of actual use is based on these intentions: "Intentions are assumed to

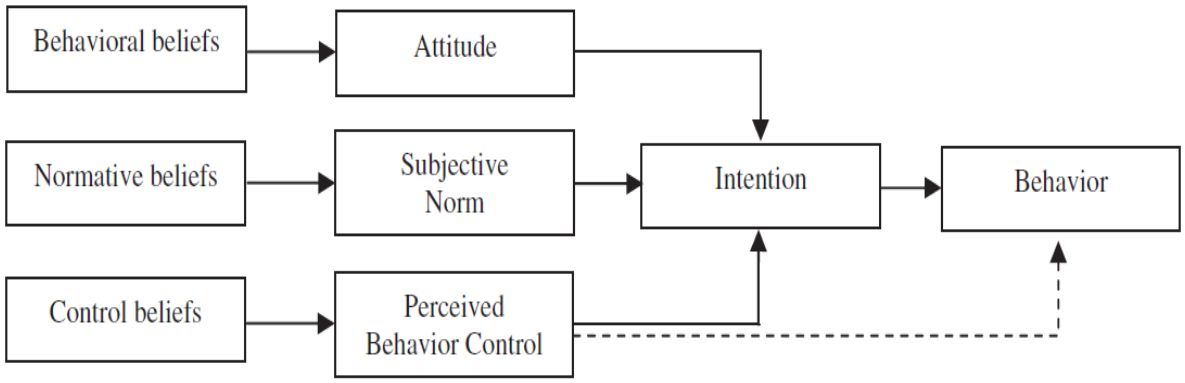
capture the motivational factors that influence a behavior that indicates how hard people are willing to try and how much effort they are planning to exert, in order to perform the behavior" (Ajzen, 1991, p. 181). TPB also suggests that intentions to use technologies, such as social media, would be greater when the users have control over the use. This perceived control is influenced by internal (e.g., beliefs in the ability) and external (e.g., resources and opportunities) constraints. This means that when students consider themselves qualified to use web 2.0 social media and face few barriers to use them, they will perceive that they have greater control over the use of these online tools.

Additionally, TPB assumes that behavior is a function of salient beliefs relevant to the behavior, which generally influence a person's intentions (Ajzen, 1991). There are three kinds of salient beliefs that constitute indirect measures of intentions: behavioral beliefs, normative beliefs, and control beliefs (See Figure 5).

TPB postulates that the basis of attitude lies in the salient belief that certain behaviors (e.g., students' usage of social media for learning) result in certain outcomes or consequences. Each outcome is weighed by students' personal evaluations of the effectiveness of the outcome. However, the foundation of subjective norm exists in the salient normative beliefs of social support and social pressure to use web 2.0 social media to support students' learning. The strength of this belief is weighed by students' motivation to comply with the prescriptions of significant others. On the other hand, control beliefs postulate that the more confidence students have in their ability and the more access they have to resources, the greater their perceived control: "Three types of beliefs—behavioral, normative, and control—are each associated with a given behavior

such as, an outcome, normative expectation, or resource needed to perform the behavior" (Ajzen, 1991, p. 198).

Figure 5. Theory of Planned Behavior (TPB)



Source: Ajzen (1991)

According to Ajzen (1991), people's behavioral beliefs and intentions depend on their attitudes towards outcomes or consequences of using technologies. In the current study, students' intentions toward using social media to support learning depend on their attitudes. Opposed to this, users' normative beliefs are based on social support and social pressure to use web 2.0 social media to support learning for their classes courses.

Based on the attempt to understand students' underlying beliefs related to their intention to use social media web 2.0 technologies to support their learning and to understand their intentions to adopt social media, the researcher chose TPB to help examine information related to students' attitudes and beliefs towards using web 2.0 social media technologies to support their learning.

Innovation Diffusion Theory (IDT). IDT was developed by Rogers (1995), and it sees innovations as being communicated through certain channels over time among the members of a social system. IDT suggests that there are four fundamental elements that

influence the spread of a new idea and the adoption of technological innovations: the innovation, communication channels, time, and a social system (See Table 1).

Table 1

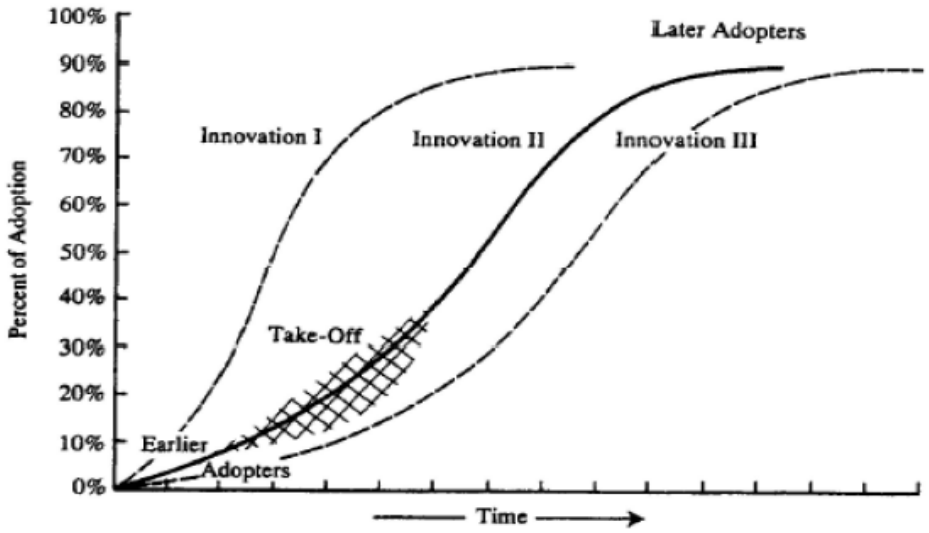
Four Main Elements in Innovations Diffusion Theory

	Description
Innovation	An innovation is an idea, practice, or object that is perceived as new by individual or other unit of adoption. Therefore, if an idea seems new to the individual, it is an innovation. However, newness in an innovation needs not just involve new knowledge because someone may have known about an innovation for some time but not yet developed a favorable or unfavorable attitude toward it, nor have adopted or rejected it.
Communication Channel	Communication is the process by which participants create and share information with one another in order to reach a mutual understanding. Diffusion is a particular type of communication in which the messages content that is exchanged is connected with a new idea. Communication channel is the means by which messages get from one individual to another.
Time	The time dimension is involved in diffusion in: 1. The innovation-decision process by which an individual passes from first knowledge of an innovation through its adoption or rejection. 2. The innovativeness of individual or other unit of adoption compared with other members of a system. 3. An innovation's rate of adoption in a system usually measured as the number of members of the system who adopt the innovation in a given time period.
Social System	A social system is a set of interrelated units that are engaged in joint problem solving to accomplish a common goal. The members or units of social system may be individuals, informal groups, organizations, and/or subsystems.

***Source*:** Adapted from Rogers, E.M.(2003). Diffusion of Innovations. New York: Free Press, p. 12-24.

Rogers divides technology or innovation adapters into five categories depending on their speed of uptake: innovators, early adapters, early majority, late majority, and laggards. The adopters or individuals are seen as possessing different degrees of willingness to adopt innovations, and thus it is generally observed that the portion of the population adopting an innovation is approximately normally distributed over time (Masrom & Hussein, 2008). The IDT also involves predictions regarding the spread of an innovation through the social system (i.e., the diffusion process), which is postulated to follow an S-shaped curve as shown in Figure 6.

Figure 6. Rogers' Innovation Diffusion Theory Curve



Source: Adapted from Rogers, E.M. (2003). Diffusion of Innovations. New York: Free Press.

Rogers (1995) concludes that adopters judge an innovation based on their perceptions in regard to five attributes of the innovation. These attributes are: relative advantage, compatibility, complexity, triability, and observability. The theory holds that an innovation will experience an increased rate of diffusion if potential adopters perceive

that the innovation 1) Can be tried on a limited basis before adoption; 2) Offers observable results; 3) has advantages relative to other innovations ; 4) is not overly complex; and 5) is compatible with existing practices and values (p. 96, as cited in Masrom & Hussein, 2008) (See Table 2).

Table 2
Summary Definitions of Five Factors of IDT

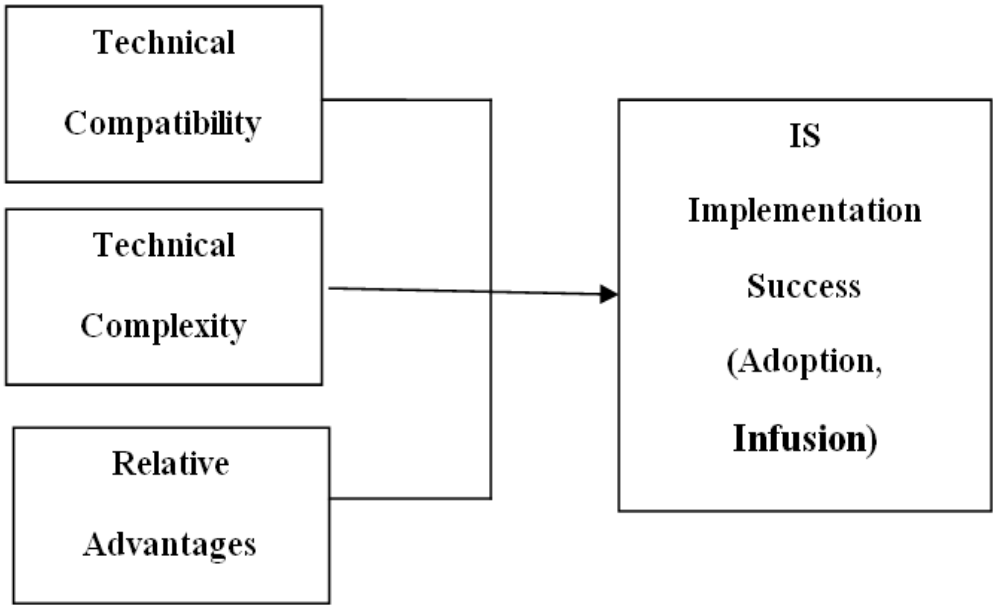
Factor	Definition
Relative Advantage	The degree to which an innovation is perceived as being better than the idea it supersedes. OR The extent to which a technology offers improvements over currently available tools.
Compatibility	The degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters. OR Its consistency with social practices and norms among its users.
Complexity	The degree to which an innovation is perceived as relatively difficult to understand and use. OR Its ease of use or learning.
Triability	The degree to which an innovation may be experimented with on a limited basis. OR The opportunity to try an innovation before committing to use it.
Observability	The degree to which the results of an innovation are visible to others. OR The extent to which the technology's outputs and its gains are clear to see.

Source: Masrom and Hussein (2008, p.96)

However, Bradford and Florin (2003) and Crum et al. (1996) have concluded that compatibility (social norms), relative advantages (perceived usefulness), and complexity

(perceived ease of use) have the greatest influence on user's adoption of innovations, as cited in Masrom and Hussein (2008) (See figure 7).

Figure 7. Information System (IS) Diffusion Variance Model



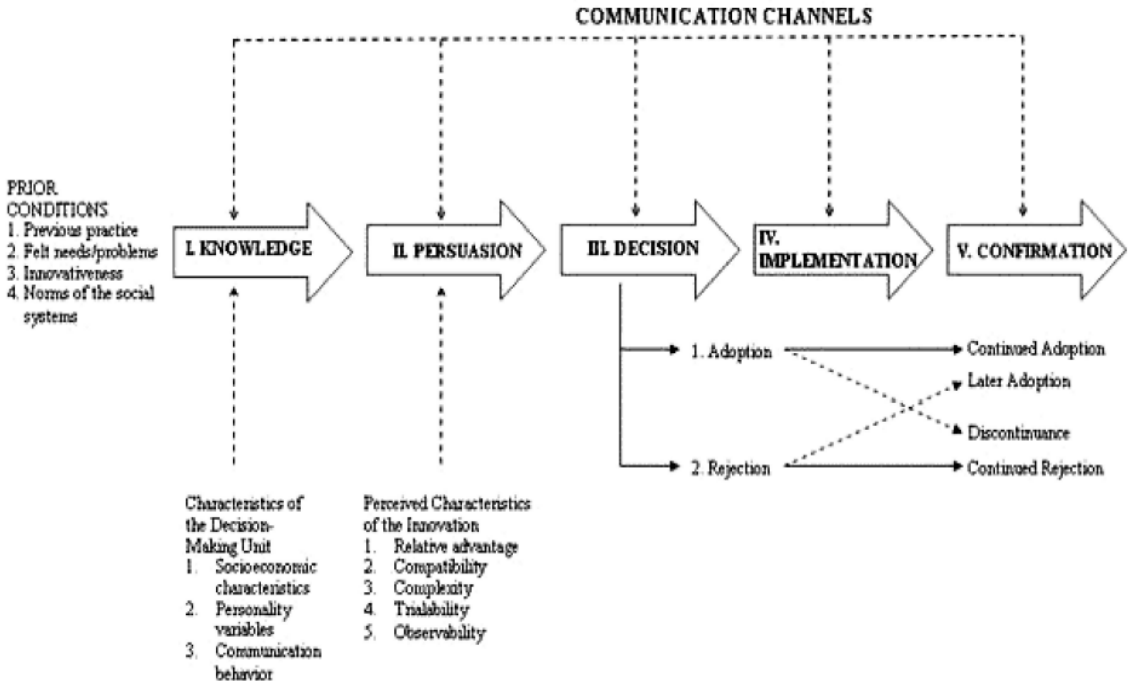
***Source*:** Agarwal and Prasad (1998), Cooper and Zmud (1990), Crum et al. (1996)

The Innovation-decision Process

Rogers (2003) argues that the innovation-decision process is the process through which an individual or other decision- making unit passes through five main steps. These steps are:

1. Knowledge
2. Persuasion
3. Decision
4. Implementation
5. Confirmation (p.168) (See Figure 8).

Figure 8. A Model of Five Stages of the Innovation-Decision Process



Source: Adapted from Rogers, E.M. (2003). *Diffusion of Innovations*. New York: Free Press, P. 170.

According to Rogers (2003) when an individual or other decision-making unit is exposed to an innovation's existence and gains an understanding of how it functions, this will lead to the occurrence of the first step of the decision-making process: the knowledge. However, when an individual or other decision-making unit forms a favorable or unfavorable attitude toward the innovation, this is the persuasion step. The third step, decision, occurs when the decision takes place when an individual or other decision-making unit engages in activities that lead to a choice to adopt or reject the innovation. The fourth step occurs when an individual or other decision-making unit puts a new idea into use, which is called the implementation step. The last step is the confirmation which occurs when an individual or other decision-making unit seeks reinforcement of an innovation-decision that has been already made, but the individual

may reverse this previous decision if he or she is exposed to conflicting messages about the innovation (p.169).

However, as IDT is used and applied as a theoretical framework to analyze the adoption of technological innovations, the current study is using the IDT model to understand factors that affect Saudi students' attitudes toward adopting social media technologies to support their learning at King Abdul-Aziz University.

The Need of the Study

Education in Saudi Arabia is improving to keep pace with the educational technology and communication in the new technological era. According to Saudi Ministry of Education (2015), Saudi Arabian education is free for all students who enroll in the government institutions. Additionally, students receive a monthly salary and equal education opportunities for both males and females. According to the Saudi Ministry of Higher Education (2015), there are twenty-four government universities and twenty-four private universities that provide male and female students with programs that help them achieve their educational goal (Higher Education in Saudi Arabia, 2015).

However, with the influx of the emerging technologies, such as social media, using and interacting with the Internet has become a required component of life. The Internet has played a significant role in developing the learning process by providing its users with an enormous amount of resources and information. Learning through the Internet has opened up horizons for people who did not have the opportunity to complete their degree, or are facing demographic obstacles or time conflicts.

Therefore, the Saudi Ministry of Higher Education encourages Saudi universities to use and integrate the electronic learning to cope with the technological revolution of

this digital era and help students to utilize technology to enhance their learning as they are already in these virtual environments communicating and interacting with each other.

To incorporate electronic learning into the Saudi universities, the Ministry of Higher Education has established "Jusur System," which is a Learning Management System (LMS) designed by the National Center of Electronic Learning (NCEL), and used by Saudi universities to foster electronic learning successfully. NCEL was created to manage and coordinate the distance education in the Saudi universities, according to Al-Najdi (2011).

Through access to Jusur, every university instructor is able to upload his or her courses to this system where students can then login and have access to these courses. Also, administrators and managers can access to this system where they are able to observe students' progress and weaknesses.

Social media technologies are one of the electronic learning tools that assist in creating channels for learners to obtain flexible learning by providing opportunities to meet with and learn from professionals, teachers, peers and others from different cultures. With these technologies, people can exchange ideas, experiences, information, and academic resources at anytime and anywhere. Ito et al. (2010) states that "basic access to technology, the ability to navigate online information, and the ability to communicate with others online are increasingly central to our everyday participation in public life" (p.28).

Although students are already in these virtual communities using online tools every day to communicate, learn, and build relationships with others, few studies have investigated the impact of social media technologies on students all over the world, and

specifically, on Saudi students' academic achievements and learning skills. As Elsayed (2011) says, "Nowadays there is a change in education from formal learning (class, faculty) to e-learning, to social learning (e-learning 2.0), but still you do not find a lot of Web 2.0 in education" (p.6).

Studies that focus on how social media can enhance education are important as schools move forward in the digital age where technologies become tools in the hands of our digital learners. Also, there is a paucity of studies that have been conducted in Saudi universities regarding understanding factors and barriers affecting Saudi students' attitudes towards adopting social media to support learning. Thus, this study aims to enrich Saudi educational resources related to social media technologies and students' learning, and help the instructors get a better understanding of their students' attitudes, expectations, practices, and barriers that they might encounter when utilizing technologies such as social media for learning purposes. This understanding will fill in the gap between the digital learners' needs, interests, and expectations, and the instructors' expectations, attitudes and adoption of social media technologies in teaching and learning environments.

Purpose of the study

This study investigates Saudi students' (at King Abdul-Aziz University, Jeddah) attitudes towards using social media to support their learning. It is designed to understand issues and improve the use of social media to advance Saudi students' learning at King Abdul-Aziz University. It is also investigating factors that influence Saudi students' attitudes and intentions to utilize social media for learning purposes. These factors may include: perceived ease of use of social media, perceived usefulness of social media,

subjective norm, students' experience level with social media, students' age, students' gender, and students' conservativeness level.

Additionally, the study explores the most important social media tools that Saudi students use and interact with, and the purposes of using such tools. It also investigates Saudi students' perceptions of the educational values and benefits that social media have brought about to Saudi students' learning culture and ecologies. Caruso and Salaway (2008) argue that the degree of students' technology acceptance and their perceptions of the values that these emerging technologies can bring to the learning environment are ambiguous. Oblinger and Oblinger state that "Given the technology experience of most Net Generation, it is not surprising they may have significant expectations regarding the use of technology to support learning" (2005, p.6).

Another purpose of this study is to investigate barriers that Saudi male and female students have encountered when they intend to use social media to support learning. This exploration will help instructors at King Abdul-Aziz University better understand what might prevent Saudi students from obtaining the benefits that come from social media technologies and that support their learning.

Research Questions

This study is designed to answer the following questions:

1. What are Saudi students' attitudes towards using social media to support their learning, particularly at King Abdul Aziz University?
2. What are examples of social media technologies that Saudi students use, and what are the purposes for which Saudi students use these tools?

3. What are barriers facing Saudi students at King Abdul Aziz University, Jeddah when utilizing social media to support their learning?
4. How well do the selected variables students' experience with six examples of social media (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype), perceived usefulness of social media, perceived ease of social media use, subjective norm, conservativeness level, and age predict Saudi students' attitudes toward using social media to support their learning?
5. Is there a relationship between students' attitudes and their intentions to use social media to support their learning?
6. Are there any differences between Saudi male and female students in:
    a. Their attitudes towards using social media to support their learning
    b. The barriers they have encountered when utilizing social media for learning?

Research Hypotheses

Based on the above questions, the researcher developed the following hypotheses to test the research questions:

H1: Saudi students at King Abdul-Aziz University have positive attitudes towards using social media to support their learning.

H2: The selected variables students' experience with six example of social media (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype), perceived usefulness of social media, perceived ease of social media use, subjective norm, conservativeness level, and age will predict Saudi students' attitudes toward using social media to support their learning.

H3: Saudi students' attitudes are related to their behavioral intentions to use social media tools to support their learning.

H4: There is a significant difference between Saudi male and female students at King Abdul-Aziz University in terms of:

a. Their attitudes toward using social media to support their learning.
b. The barriers they have encountered when utilizing social media for learning purposes.

The Significance of the Study

Hartshorne and Ajjan (2008) argue that students no longer use the web to obtain information but instead create information and share it with each other. They use web 2.0 applications such as wikis, social networking, social bookmarking, and blogs on a regular basis. As social media grows more and youth get increasingly attached to them and as there is a paucity of resources regarding the impacts of social media technologies on students' learning, it is important to investigate factors that influence Saudi students' attitudes towards utilizing social media to support their learning.

Understanding Saudi students' attitudes towards using social media for learning will provide Saudi education, particularly King Abdul-Aziz University, with resources that benefit instructors and help them to better understand their students' online learning and practices. This understanding will help the instructors at King Abdul-Aziz University consider how to deal with the net generation and help them utilize these tools to improve their learning: "Teachers can learn what technological equipments they need in their classrooms simply by asking students, and they can lobby to get these items installed in school computer labs and libraries," said Prensky (2006, p. 10).

Findings of this study may help the instructors change their attitudes towards the adoption of online tools such as social media in order to improve their students' learning. Prensky (2006) argues that "Recognizing and analyzing the characteristics of the new landscape emerging in the digital age will help the educational leadership with which we should be providing our students, both now and in the coming decades" (p.9). He emphasizes that, "Instructors must find ways to incorporate into the class discussions the information and knowledge that their students acquire outside class in their digital lives" (p.10).

Additionally, understanding students' attitudes towards adopting social media for learning may help the instructors to develop their personal learning and technical knowledge and skills in order to keep pace with their students' technical skills: "Teachers must remember that they are teaching in the 21st century, thus they need to master all the new technologies," says Prensky (2006, p. 10).

Results of this study will also reveal information about the social media tools that Saudi students use and interact with and how Saudi students use and perceive the values of such tools in their learning ecologies. Hatkevich (2008) argues that understanding which technologies students need to use in order to support learning is a fundamental challenge within the educational field. Consequently, this investigation will help Saudi instructors have knowledge of what social media technologies their students interact with so that they can consider how to develop their experiences and knowledge in order to effectively integrate such tools into their teaching environments.

Findings in this study will also identify and inform Saudi instructors about how emerging technologies such as social media can help students support their learning

based on students' perspectives. Thus, this will help the instructors to better understand their students' needs and interests. Prensky (2006) states that "Our accent from the pre-digital world often makes it difficult for us to effectively understand and communicate with our students" (p.9).

Additionally, it is important to explore barriers facing Saudi students when they intend to utilize social media for learning purposes. This exploration would help Saudi instructors and administrators at King Abdul-Aziz University to consider steps to overcome challenges that face the students when they try to adopt social media for learning in order to improve their academic achievements. Kennedy et al. (2006) argue that knowing and understanding the many sophisticated technologies the net generation utilizes may overcome barriers when educating them.

Based on the instructors' interview responses at King Abdul-Aziz conducted by this researcher (2013), Saudi students use social media outside school, in their daily lives activities, and at school in their learning environments. Therefore, studying this generation's perceptions, expectations and attitudes regarding the utilization of social media for learning purposes is a crucial investigation that will benefit all educational areas at King Abdul-Aziz University: the students, the instructors, and the administrators.

Definition of Terms

Attitude: refers to the affective feeling of like or dislike toward an object, which can be basically anything that has an influence on behavior (Psychology Glossary, 2011). Fishbein and Ajzen (1980) distinguish between two types of attitude constructs: attitude toward the object, which refers to a person's affective evaluation of a specified attitude

object, and attitude toward the behavior, which refers to a person's evaluation of a specified behavior involving the object.

Barriers: refer to any obstacles or difficulties that prevent people from using a new innovation or affect their attitudes toward it. For example, a barrier is a factor that affects students' attitudes towards utilizing social media for learning purposes.

Conservativeness: according to The American Heritage Dictionary of The English Language (2014), a conservative person is a one who favors traditional views and values, tending to oppose change. Oxford University Press (2014) defines a conservative person as holding to traditional attitudes and values and cautious about change or innovation, typically in relation to politics or religion.

Digital Natives (Millennials): refers to today's students who were born in 2001 until now. They are native speakers of technology, fluent in the digital language of computers, video games, and the Internet (Prensky, 2006).

Electronic Learning or Online Learning: Roffe (2002) defined online learning as a way people communicate and learn electronically. It is the use of the Internet technologies to deliver a broad array of solutions that enhance knowledge and performance according to Rosenberg (2001).

E learning 2.0: refers to "learning through digital connections and peer collaboration, enhanced by technologies driving web 2.0," according to Elsayed (2011, p. 5). E-Learning web 2.0 is learning that supports learners with the social aspects of the learning process through using social software that enhances social connection and collaboration between learners (The Egyptian National Council, 2008).

Entsab: refers to a method that allows students to seek their education while they are off campus with only a final exam, which includes a midterm exam.

Formal Learning: is described as learning that is institutionally sponsored or highly structured, i.e., learning that happens in courses, classrooms, and schools, resulting in learners receiving grades, degrees, diplomas, and certificates. (Cross, 2007; Selwyn, 2007) It is the process of acquiring knowledge or learning skills. According to Birkenholz (1999), learning is often defined as a change in behavior, which is demonstrated by people implementing knowledge, skills, or practices derived from education.

Informal learning: is learning that rests primarily in the hands of the learner and happens through observation, trial and error, asking for help, conversing with others, listening to stories, reflecting on a day's events, or stimulated by general interests (Cross, 2007; Selwyn, 2007). Livingstone (2001) defines informal learning as "any activity involving the pursuit of understanding, knowledge or skill which occurs without the presence of externally imposed curricular criteria" (p.5).

Learning Management System (LMS): is a software application that automates the administration, tracking, and reporting of training programs, and online events (Ellis, 2009).

Liberalism: According to The American Heritage Dictionary of The English Language (2014), a liberal person is a one who favors proposals for reform, open to new ideas for progress, and tolerant of the ideas and behavior of others, and is not bound by traditional thinking, broad-minded. According to Oxford University Press (2014), a liberal person is open to new behavior or opinions and willing to discard traditional values.

Net Generation—Net Savvy: is defined as someone who is the paramount of technology use and proficient with emerging technologies (Held, 2009).

Social Capital: is described as the resources that are created in social networks and relationships between people and that have a certain value or benefit for individuals participating in network/relationships. Social capital is created through interactions with others; thus it belongs to a group of people and not to individuals (Coleman, 1988).

Social Media: Kaplan and Haenlin (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. It is a medium for social interaction as a super-set beyond social communication enabled by ubiquitously accessible and scalable communication techniques" (p.63). The term "social media" is often interchangeable with the terms web 2.0 and social software (Dabbagh & Reo, 2011 b).

Social Networking Sites (SNS): online web-based tools and applications that helps to establish relationships between individual and groups of people with a common interest. Members of a social network may or may not be acquainted outside of the virtual connection (Lenartz, 2013). Examples of the most visited social networking websites include Facebook, Twitter, MySpace, LinkedIn, and Ning (eBizMBA, 2011).

Social Software: is software that supports group interaction. It is the scope of application, which enables social connections, groups' interactions, shared web spaces for collaboration, and information exchange in web based environments (Shirky, 2003 & Bragg, 2005).

User Generated Content (UGC): can be seen as the sum of all ways in which people make use of Social Media, Kaplan and Haenlin (2010). It is usually applied to describe the various forms of media content that are publicly available and created by end-users.

Web 2.0: refers to technologies with which the possibilities for communication and collaboration have rapidly increased. Alexander (2006) defines web 2.0 as a series of tools, utilities, websites, and applications based around social software and enhanced by the social connectivity of the World Wide Web.

Chapter Summary

Chapter 1 is an introduction to this study and its purposes. The researcher in this chapter explained the need, the purpose, and the significance of the study. The researcher also described the research questions and hypotheses in detail. In addition, the theoretical framework on which the study relies was provided. Finally, the researcher defined the operational definition of this study.

Chapter 2

Literature Review

Introduction

This study is designed to investigate attitudes of Saudi students towards using social media to support their learning at King Abdul-Aziz University. It also aims to understand factors that predict the students' attitudes toward using social media to support learning. The researcher selected this topic due to the current importance of social media in different aspects of peoples' lives, especially in the educational field. The study is conceptualized according to social learning theories by Bandura (1977) and Vygotsky (1962,1978); Technology Acceptance Model; which is developed by Davis (1989); Theory of Reasoned Action developed by Fishbein and Ajzen (1980); and Diffusion of Innovations Theory developed by Rogers (1995).

With the influx of emerging technologies in this digital era, learning online has become a part of students' life and practices. Mcloughlin and Lee (2007) argued that learning on demand is becoming a type of lifestyle in modern society. When the information technology merges with education, the electronic learning has opened up numerous paths and horizons for learners to acquire knowledge and share information. As opposed to traditional classes, the role of the learners in the new e-learning 2.0 era is more active and participatory: the learners are not simply consumers of materials, which have been compiled by instructors (Mason & Rennie, 2008; Palloff & Pratt, 2007).

Social media technologies are one of the electronic learning tools that our students use to search, share, and create information. Wang et al. (2012) stated that "The strengths of social media include wide accessibility and personalized user profiles that allow the

targeting of specific audiences for entertainment, marketing, and education" (p. 1162). With these tools, learning has moved from formal learning into informal, and our children have become net savvy, not only searching for information and resources via the internet, but also sharing and creating new ideas and knowledge. According to Elsayed (2011), "As in today's environment, students have all the day access to the library, varied information and social networking tools available via the Internet; it is assumed that they have already experiences using these tools and therefore a high acceptance" (p. 6).

When social media become tools in the hands of the digital learners, some learning phenomena and participation genres appear to characterize these new cultures of learning which learners are practicing using these emerging technologies. Thomas and Brown (2011) argued that in the culture of new media, people learn through their interaction and participation with one another and share their interests and opinions .In addition, in these 'collective environments' there are no physical or geographic constraints, and the availability is one of the characteristics that distinguishes these environments from other non-virtual institutions. These collective environments also facilitate the peer-to-peer learning and collaboration.

There is growing evidence that social media technologies are increasingly supporting informal learning at home and in the community and that informal learning is becoming a vital element of education for learners of all ages (Selwyn, 2007). Informal learning is learning that rests primarily in the hands of the learner and happens through observation, trial and error, asking for help, conversing with others, listening to stories, reflecting on a day's events, or stimulated by general interests (Cross, 2007 & Selwyn, 2007). On the other hand, formal learning is described as learning that is institutionally

sponsored or highly structured, i.e., learning that happens in courses, classrooms, and schools, resulting in learners receiving grades, degrees, diplomas, and certificates. Livingstone (2001) defined informal learning as "any activity involving the pursuit of understanding, knowledge or skill which occurs without the presence of externally imposed curricular criteria" (p.5). It is an important and predominant form of learning in the adult stage because it highlights the learners' agency of learning and happens in most of the scenes in everyday life, which may surpass the conventional meaning of learning. Thus, utilizing social media technologies, students can develop their informal learning and support their formal learning.

However, with the continuous emerging of social media adopted by the *net generation*, higher education still challenges a big gap between the *net generation*'s needs and practices, instructors' attitudes, and the traditional equipments of schools. Dabbagh and Kitsantas (2012) stated that, "higher education institutions are still primarily relying on traditional platforms such as course and learning management systems (CMS/LMS) that do not capitalize on the pedagogical affordances of social media" (p.3). Thus, learners should be allowed to manage and maintain a learning space that facilitates their own learning activities and connections to peers and social networks across time and place (Mcloughlin and Lee, 2010, Selwyn, 2007, Valjataga et al., 2011, and van Harmelen, 2006).

This chapter reviews the literature reviewed in previous studies related to this study such as social media (definition, history, and examples), electronic learning, and youth's usage of social media for learning; social learning, online learning using social media technologies, and/or informal learning. However, in order to cover all variables of

the study, the researcher tries to make connection between the previous studies and the purpose of the current study.

Social Media

Kaplan and Haenlin (2010) defined 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. It is a medium for social interaction as a super-set beyond social communication enabled by ubiquitously accessible and scalable communication techniques" (p. 63). These technologies include a variety of networked tools that emphasize the social aspects of the Internet as a channel for communication, collaboration, and creative expression. The term of "social media" is often interchangeable with the terms "web 2.0", "social software", and "User Generated Content (UGC)", (Dabbagh & Reo (2011 b); Kaplan & Haenlin, 2010).

Web 2.0. Alexander (2006) and Donelan et al. (2010) claimed that there is not one clear, singular definition of web 2.0 at the present time. According to Kaplan and Haenlin (2010), web 2.0 is a term that was first used in 2004 to describe a new way in which software developers and end-users started to utilize the World Wide Web. Alexander (2006) defined web 2.0 as a series of tools, utilities, websites, and applications based around social software and enhanced by the social connectivity of the World Wide Web. Donelan et al. defined web 2.0 as an evolution of the World Wide Web, which involves a shift from static content to a dynamic platform based on collaboration. It is a platform whereby content and applications are no longer created and published by individuals, but instead are continuously modified by all users in a participatory and collaborative fashion (Kaplan & Haenlin, 2010).

Another attempt to define web 2.0 was undertaken by O'Reilly (2007), who defines web 2.0 as "architecture of participation," continuously updated and remixed by multiple users, which provides a user-driven network beyond what was possible with web 1.0. According to O'Reilly (2005), web 2.0 can be defined in a number of ways. The difference between web 1.0 and 2.0 technologies can be found on several levels, one of which is technical: the affordances of web 2.0 tools are greater than the ones of the corresponding web 1.0 tools, according to Karasavvidis (2010). Kim (2008) argued that blogs, as one example of a web 2.0 tools, have more affordances compared to content management systems (CMS). Also, wikis, as a web 2.0 based technologies, have considerable advantages over threaded discussions (West &West, 2009). O'Reilly (2005) argued users ''add value'' to the technologies, which are specifically designed around student's participation. The users' participation is what distinguishes these tools from other technologies. So, with web 2.0 the entire audience has the ability to generate content, making it a more interactive process (Lenartz, 2013). The key feature of web 2.0 is user-driven, collaborative content provided through openness and sharing of services and platforms according to Alexander (2006).

Shuen (2008) argued that web 2.0 is about harnessing network effects and users' collective intelligence to build applications that get better the more people use such tools. Thus, social web 2.0 is a stage of the World Wide Web, where learning is characterized as a community of practice in which people interact and share their interests and learn together and develop rich resources. Thalheimer (2008), Ferretti et al. (2009), and Renner (2006) argued that Users/Learners are empowered to search, create, and collaborate in order to fulfill intrinsic needs to learn new information. Web 2.0 does not only support

social interaction, but it allows feedback, conversation, and networking. It was also designed with flexibility and modularity that enable collaboration, according to Shittu et al. (2011).

However, web 2.0 is characterized by some functions that distinguish it from web 1.0 (e.g., personal web pages). Kaplan and Haenlin (2010) stated that "Although web 2.0 does not refer to any specific technical update of the World Wide Web, there is a set of basic functionalities that are necessary for its functioning" (p.61).

One of these characteristics is *Adobe Flash*, which is a popular method for adding animation, interactivity, and audio/video streams to web pages. Another one is *Really Simple Syndication* (RSS), which is a family of web feed formats used to publish frequently updated content, such as blog entries or news headlines in a standardized format. A third one is *Asynchronous Java Script* (AJAX), which is a technique to retrieve data from web servers asynchronously, allowing the update of web content without interfering with the display and behavior of the whole page (Kaplan and Haenlin, 2010).

However, O'Reilly (2007) concluded that there are seven core competencies of web 2.0 which can be applied to websites, applications, and software in order to determine whether the qualifications are considered part of web 2.0. These criteria include:

1. Services, not packaged software, with cost-effective scalability.
2. Control over unique, hard-to-recreate data sources that get richer as more people use them.
3. Trusting users as co-developers.
4. Harnessing collective intelligence

5. Leveraging the long tail through customer self-service.
6. Software above the level of a single device.
7. Lightweight user interfaces, developments, and business models.

Shang et al. (2011) argued that web 2.0 service models have four components. Each of the components contributes different functions. These four components are:

1. Socialization: web 2.0 allows users to observe the web data and participate in a web community.
2. Externalization: web 2.0 allows users to send out data (such as, writing emails, sharing information, teleconferencing, and uploading videos or audios).
3. Combination: web 2.0 allows users to use social bookmarks, share resources, and filter web content.
4. Internalization: web 2.0 allows users to reflect web 2.0 content on strategy implement through simulation and sharing of best practices.

Web 2.0 technologies include blogs, wikis, social bookmarking, media-sharing services (e.g., YouTube), social networking sites, collaborative editing tools, syndication, and modification technologies (O'Reilly, 2007; Donelan et al., 2010). Learning through web 2.0 applications and tools contributes to the transformation of the present learning industry, according to Fralinger and Ownes (2009).

User Generated Content (UGC). While web 2.0 represents the ideological and technological foundation, UGC can be seen as the sum of all ways in which people make use of social media. The term, which achieved broad popularity in 2005, is usually applied to describe the various forms of media content that are publicly available and created by end-users (Kaplan & Haenlin, 2010).

Social Software. In addition to web 2.0 and UGC, the third concept that is interchangeable with social media is "social software". Bragg (2005) defined social software as the scope of applications, which enables social connections, groups' interactions, shared web spaces for collaboration, and information exchange in web based environments. Shirky (2003) defined social software as software that supports group interaction. The term social software is the major component of web 2.0.

Social Media Definition and History

According to Kaplan and Haenlin (2010), Truscott and Ellis (1979) had created the Usenet, which is a worldwide discussion system that allowed users of the Internet to post public messages. Twenty years earlier, social media started to emerge when Bruce and Susan Abelson founded "Open Diary" an early social networking site that brought together online diary writers into one community. A year later, the term "weblog" was first used, and shortened as "blog", at the same time, one blogger transformed the noun "weblog" into the sentence "we blog". Then, with the availability of the high-speed of the Internet, social networking sites such as MySpace (2003) and Facebook (2004) were created, which gives more popularity of the concept "social media" in this digital era. Other tools that contribute to the prominence of the concept of "social media" are "Virtual Worlds" which are computer-based simulated environments inhabited by three-dimensional avatars (Kaplan and Haenlin, 2009c).

Social media is a 21st century term used to broadly define a variety of networked tools or technologies that emphasize the social aspects of the Internet as a channel for communication, collaboration, and creative expression (Dabbagh & Reo, 2011 b). Kaplan and Haenlin (2010) defined social media as a group of Internet-based applications that

build on the ideological and technological foundations of web 2.0. However, the differences between web 2.0, social media and social networking have not been clearly distinguished. Lenartz (2013) argued that the term social media can be used to categorize web 2.0 applications, including social networking. Social media reflects the definition of web 2.0 as the creation of user-generated content, often with a specific agenda or message that the creator is intending to promote. Kaplan and Haenlin (2010) argued that social media is a new format that relies on social networking and other web 2.0 applications, services and websites. Kear (2010) defined social networking as a subset of web 2.0 and social media consisting of social networking websites. Kear argued that the category of social networking is not well-defined, but can be described as allowing online connections between users.

However, the terms "social media" and "social networking" are used interchangeably. Lenartz (2013) stated that:

> The term "social networking" and "social media" appear to present a similar issue, often being used interchangeably and without a clear definition of either term. In general, the term "social media" seems to be most often used as a broader umbrella term that includes many of the Web 2.0 functions, including social networking. The term "social media" is generally more appropriate to define methods of conveying a message as an extension of traditional media outlets. The term "social media" also seems more appropriate when the intention is for organizations or individuals to convey an intentional message to an audience. Organizations often use this new technology to achieve a specific purpose such as conveying a message, connecting with an identified group

> sharing a message, or promoting their organization. Use of a range of Web 2.0 applications in this manner is most appropriately referred to with the umbrella term "social media" (p. 10).

boyd and Ellison (2007) defined social networking as web-based services that allow users to do three things, including: "(a) construct a public or semi-public profile within a bounded system, (b) articulate a list of other users with whom they share a connection, and (c) view and traverse their list of connections and those made by others within the system"(p.211). Also, boyd (2003) defined social networks as "networked publics," space constructed through a combination of networked technology and the imagined community that emerges online. She argued that there are four properties categorizing social networks, including searchability, persistence, replicability, and scalability. Additionally, boyd mentioned three dynamics differentiating social networks from other tools such as audiences, collapsed contexts, and blurring of public and private.

There are many websites and online tools that involve these dynamics and properties. boyd and Ellison (2007) argued that social networking websites include those which allow establishing connections among users such as Facebook, LinkedIn, and MySpace; tools directed toward a specific function such as Flickr (photo sharing), Last.FM (music), YouTube (Video sharing); and websites that allow users to create their own social networks such as Ning. However, Lenartz (2013) mentioned some features of social networking websites that differ from one website to another, including allowing the users to leave messages on the pages of other users they are connected to, having private message systems similar to email or instant messaging, sharing photo and video, blogging, having mobile-specific applications, and providing users with online games.

Examples of Social Media and Social Networking Sites

There are many examples of social media and social networking sites which youth interact with and use in their daily life. boyd (2003) argued that examples of social media and social web 2.0 include the following: Internet Messaging, Text Chat, Internet, Blogs, Weblogs, Wikis, Social Networks, Search Engines, Social Guides, Social Bookmarking, Social Libraries, and Peer-to-Peer Social Network.

Mcloughlin and Lee (2007) argued that popular emerging social media websites and software include Social Networking Sites such as Facebook, MySpace, and Friendster; which allow users to build online identities by customizing their personal profiles with a range of multimedia elements, as well as interacting with existing contacts and establishing relationships with others. Other social media tools include YouTube and Flickr, which help the users share videos and photos with both "real world" and "virtual friends". Silver (2008) argued, "Web 2.0" concepts have led to the development and popularity of web culture communities such as social-networking sites, video sharing sites, blogs, and wikis.

According to Dabbagh and Reo (2011b) and Dabbagh and Kitsantas (2012), examples of social media include experience- and resource-sharing tools, such as Delicious, WordPress, and Twitter that enable online/Social Bookmarking, Blogging, and Microblogging; Wiki software such as PBworks that enables the creation of collaborative workspaces; Media Sharing tools such as Flickr and YouTube that enable social tagging; Social Networking Sites (SNS) such as Facebook and LinkedIn that enable social networking; and Web-based (cloud-computing) office tools such as Google Apps that enable document and calendar sharing and editing among other things.

However, there are many classifications and types of tools considered to be social media technologies, which facilitate the social factor and depend on the users' productions and participations. In their business horizons (2010) article, Kaplan and Haenlin classified social media into six different forms: projects produced collaboratively by users (e.g. Wikipedia), Social Networking Sites (e.g. Facebook), Content Communities (e.g. YouTube), Blogs and Microblogs (e.g. Twitter), Virtual Social Worlds (e.g. Second Life), and Virtual Game Worlds (e.g. World of Warcraft) (See Examples of social media Table 3).

Table 3
Examples of Social Media Technologies

Social networking sites	MySpace, Facebook, Faceparty
Creativity works sharing sites	• Video Sharing Sites(YouTube) • Photo Sharing Sites (Flickr) • Music Sharing Sites (Jamendo.com) • Content Sharing Combined with assistance (Piczo.com) • General Intellectual Property Sharing Sites (Creative Commons)
User-sponsored blogs	The unofficial Apple Weblog, Cnet.com)
Company-sponsored websites/blogs	Apple. Com, P&G's Vocalpoint
Company-sponsored cause/help sites	Dove's Campaign for Real Beauty, click2quit.com
Invitation-only social networks	ASmallWorld.net
Business networking sites	LinkedIn
Collaborative websites	Wikipedia
Virtual Worlds	Second Life
Commerce Communities	eBay, Amazon.com, Craig's List, iStockphoto, Threadless.com
Podcasts	For Immediate Release: The Hobson and Holtz Report
News delivery sites	Current TV
Educational Materials sharing	MIT OpenCourseWare, MERLOT

Open Source Software communities	Mozilla's spreadfirefox.com, Linux.org
Social bookmarking sites allowing users to recommend online news stories, music videos, etc	Digg, del.icio.us, Newsvine, Mixx it, reddit

***Source*:** Glynn Mangold & David (2009).

However, for this study, the researcher uses the most popular social media tools and social networking websites according to the previous literature review, and according to King Abdul-Aziz University instructors' responses regarding what social media tools they are incorporating into their teaching environments. These technologies include Facebook (SNS), YouTube (Media Sharing), Twitter (Microblogging), WhatsApp (Text Chat), Wikipedia (Wikis), and Skype (Video Teleconferencing). Applications such as Blogs, Wikis, Social Networking tools (e.g., Facebook), and video sharing tools are gaining popularity in college campuses for teaching and learning purposes (Johnson, Levine, & Smith, 2009).

Facebook. Facebook is a social networking site founded by a group of Harvard University students in their dorm room (Lenartz, 2013). At the beginning, the website was only accessible to college and university students requiring an ".edu" email address to register, according to Kirkpatrick (2010). After that, Facebook expanded to colleges across the country and became an integral part of the lives of modern students (Lenartz, 2013). Facebook enables its users to connect by creating personal information profiles, inviting friends and colleagues to have access to those profiles, and sending e-mails and instant messages between each other. These personal profiles can include any type of information, including photos, video, audio files, and blogs (Kaplan & Haenlin, 2010).

Allow to Hughes et al. (2012), Facebook allows users to create a profile where they can post information about themselves ranging from their occupation, to their

religious and political views, to their favorite movies and musicians. On this profile, both the user and their 'friends' can post web links, pictures and videos of interests. Furthermore, Facebook also offers the facility to send private and public messages to other users and even engage in real-time instant messaging. All of these features coupled with the creation of applications, groups and fan pages make Facebook broadly popular for online socializing (Hughes et al. 2012).

According to Martinez-Aleman and Wartman (2009), the use of Facebook is popular at colleges and universities, with an estimated 85% of students using Facebook and this number continues to increase. On average, these students spend 30 minutes per day on the website as it becomes interconnected into the students' everyday lives (Pempek, Yermolayeva, & Calvert, 2009). According to Internet World Stats (2012), there were over 835 million registered users of Facebook worldwide, which indicates a large number of Facebook users.

Twitter. Additional application of social media used in the current study is Twitter, created 2006, which is considered microblogging. According to Yanru Guo et al. (2012), microblogs allow people to post short messages that are displayed on their personal pages in real time via the web, SMS, instant messaging clients, among other methods. The postings can then be viewed by others (i.e. followers). Most microblogging service providers limit the number of characters of users' postings to 140. This short post feature is a distinguishing factor that makes microblog a unique, asynchronous, fast mode of communication (Yanru Guo et al. , 2012).

Hughes et al. (2012) stated that:

> The newest and perhaps most interesting SNS is Twitter, as its focus seems to be on the sharing of opinion and information (Kwak et al., 2012) rather than on reciprocal social interaction (Huberman, Romero, & Wu, 2009). Twitter allows users to update their account with short statement named "tweet" limited to 140 characters. Other users are able to 'follow' these updates. The service is rapidly growing with recent statistics suggesting that in January 2010 alone Twitter attracted 73.5 million unique viewers, and from 2009-2010 it demonstrated an annual membership growth rate of 11055% (Tech-Crunch.com, 2010). Twitter currently has in the region of two-hundred million registered accounts (p. 561-562).

YouTube. YouTube is another example of social media technologies that allows content sharing. It is an online storehouse, and free video sharing website from which users can watch video clips as well as upload self-made, self-edited, or imported clips for free. After Google's purchase of YouTube in 2006, it has institutionalized quickly (Kim, 2011). Kaplan and Haenlin (2010) argued that YouTube is considered one of the content communities. The main objective of content communities is the sharing of media content between users. Content communities exist for a wide range of different media types, including text (e.g., BookCrossing, via which 750,000 people from over 130 countries share books), photos (e.g., Flickr), videos (e.g., YouTube), and PowerPoint presentations (e.g., Slideshare). Users on content communities are not required to create a personal profile page; if they do, these pages usually only contain basic information, such as the date they joined the community and the number of videos shared.

Yuan-Hsiang Lo (2013) argued that YouTube allows users to freely access any videos that are set to public, including videos that contain educational content. Whether a video is created by an accredited university, or by a random video blogger, users can decide what best suits their needs. Benevenuto et al. (2008) argued that features of YouTube such as video response allow users to converse through videos. Users begin with an opening video which enables them to create sequences of video having many responses from participants and fans.

Wikipedia. Another social media tool used in this study is Wikipedia, which is considered a collaborative project tool (Wikis). (2010) argued that collaborative projects enable the joint and simultaneous creation of content by many end-users and are, in this sense, probably the most democratic manifestation of UGC. One of the collaborative projects tools are wikis, which are websites that allow users to add, remove, and change text-based content. Exemplary applications within this category include the online encyclopedia Wikipedia, a wiki currently available in more than 230 different languages, and the social bookmarking web service Delicious, which allows the storage and sharing of web bookmarks (Kaplan and Haenlin, 2010). Shen et al. (2013) defined Wikipedia as, "the world's largest web-based free content encyclopedia project, with more than 100 000 regularly active contributors working on more than 20,000,000 papers in more than 283 languages, attracting more than 400,000,000 unique visitors monthly as of January 2012" (p. 520).

WhatsApp. Another tool of social media is WhatsApp. The cross-platform chat application was founded in 2009 by two ex-Yahoo employees Brian Acton and Jan Koum. It is an Internet based- communication tool that allows users who also have

WhatsApp installed to send text messages for free to each other. WhatsApp replicates the text experience through push notifications (Cotton, 2013). WhatsApp also supports many different message types, from simple text to pictures to audio files. Riyanto (2013) argued that WhatsApp allows its users to use their Internet connection to send messages to each other. WhatsApp is like a chat program for mobile phones. Smart phones are becoming increasingly popular and WhatsApp is available for almost all Smartphones. WhatsApp involves not only sending text message but also message broadcasting, files, videos, audio media messages as well as their location using integrated mapping features (Riyanto, 2013).

Riyanto (20130 argued that users take advantage of WhatsApp to text their friends in other countries without paying the exorbitant international texting costs that come with traditional communications. Rolfe (2013) argued that a big reason for the popularity of such apps is that they allow their users to message one another without paying high fees for text messages.

Skype. The final tool of social media used in this study is Skype, considered a software application that allows users to make voice and video calls through the Internet. Skype is Internet-based communication software released in 2003, which includes voice, instant messages capabilities, and video. It was founded by Niklas Zennstrom of Sweden and Janus Friis of Denmark. One of its features is chatting. Just as with all chat tools, such as AOL and Yahoo, users have the ability to type messages to friends, and the messages are received immediately, (Siobhan, 2008).

Skype also was one of the early successes in using the voice-over-Internet protocol (VoIP). According to Siobhan (2008) with a headset and microphone, telephone

calls can be made to up to five Skype users at one time at no cost, though the quality of the call diminishes with each additional caller. Librarians who have a question to talk over with a colleague can look at their list of online contacts and make a quick Skype call to work out the solution to the question. An additional feature of Skype is the webcam. Siobhan stated that an added feature of Skype is the ability to connect a webcam to the software and have videoconference calls with colleagues. While not a necessity, adding video to a call really does add an extra dimension of collegiality.

Millennials—Digital Natives—and Potential Social Media

Over the past ten years, a rapid growth has radically changed the way people interact with the Internet and with each other (Seo, 2013). In the presence of the Internet in this digital era, people can collaborate, interact, and work online together while sitting in different places and countries. However, young learners of the new millennium embrace these newer modes of online communication more readily than their elders. Many Millennials have grown up with interactive programs such as a Facebook, Twitter, and MySpace, identifying them as the social tool of choice (Seo, 2013).

According to Prensky (2009), there is a gap between older and younger users of digital media. Prensky addressed this digital divisions by labeling people according to their early or late exposure to digital media as: Milennials (Digital Natives) or Digital Immigrants. Prensky identifies Millennials as “digital natives” due to their early and constant exposure to digital media. Digital Natives refers to today’s students (2001). They are native speakers of technology, fluent in the digital language of computers, video games, and the Internet (Prensky, 2006). On the other hand, Digital Immigrants are those who were born into the digital world. Thus, to decrease such gap, as educators, we must

take our cues from students' 21st century innovations and behaviors, abandoning, in many cases, our own pre-digital instincts and comfort zones (Prensky, 2006). We need to help all of our students take advantage of new emerging technologies to educate themselves. According to Prensky (2006):

> Our young people generally have a much better idea of what the future is bringing than we do. They're already busy adopting new systems for communicating (instant messaging), sharing (blogs), buying and selling (eBay), exchanging{peer-to-peer technology), creating (Flash), meeting (3D worlds), collecting(downloads), coordinating (wikis), evaluating (reputation systems), searching (Google), analyzing (SETI), reporting (camera phones), programming (modding), socializing (chat rooms), and even laming (Web surfing). (p10)

However, several studies have concluded that rich experiences with social media and networking promised improved educational achievement, students' engagement, and collaboration (Greenhow & Robelia, 2009). Blankenship (2011) stated that "Social media often also inspire new creativity in the way subjects are taught" (p.40). Yet, few educators adopt social media and networking to their instructional planning to support students' learning skills and achievements. Thus, Prensky suggested that we need more radical solutions to help these digital natives utilize such digital tools effectively for their learning. Prensky (2006) argued that schools should be teaching kids how to program, filter knowledge, and maximize the feature and connectivity of online and digital tools. Blankenship states that, "Interactive, community-focused online tools—like Skype, Twitter, Facebook, YouTube, blogs, wikis, and the educational software Blackboard—are

becoming so dominant in the classroom that it's hard to imagine any professor or student making it through a week without them" (p.39).

Social Media in Higher Education

Social media technologies have significant effect on the field of higher education. According to Lenartz (2013), institutions and individuals have begun experimenting with novel approaches for the use of social media in a wide range of higher educational functions. One of these institutions is the City University of New York (CUNY). CUNY has created a closed social network for faculty, staff, and graduate students to connect the university's campuses and create online communities for members of CUNY (Kaya, 2010).

Another institution is Arizona State University where social media (e.g., Facebook, Twitter, RSS) are used as online emergency alert systems to alert students and staff of emergency situations (Mendoza, 2010). Other examples include London School of Business and Finance that offers Master's in Business Administration materials on Facebook. These materials offer message boards, lectures, and discussions for students to meet their interests and help them register and pay for their course (Kaya, 2010).

University of Nevada is another example of the institutions that utilize social media in higher education. As Lenartz (2013) cited "Las Vegas student Devin Valencia won a College Affordability Challenge grant for a Facebook application she developed to help students locate financial aid (Pratt, 2011). Ms. Valencia's application links financial aid databases to the social networking websites Facebook, allowing students to search for financial aid, refer opportunities to each other, and announce aid they have applied for or received" (p.19).

Additionally, in Denmark, Aalborg University uses an open source social networking environment called “Ekademia” to create networks within the class between students and others in the field and to supply them with collaboration tools (Lenartz, 2013). In this university, Ryberg et al. (2010) found that students use these tools for communication, social interaction, sporting events, and parties’ invitations.

At the Michigan State University, Ellison et al. (2007) studied students’ utilization of Facebook as a virtual learning community. Their findings showed that students utilize Facebook to develop and maintain bridging social capital at college. Bridging social capital is when a member of a social network provides “useful information or new perspectives” (p.1146). The growth and popularity of Facebook among the students combined with the utilization of Facebook to maintain bridging social capital were related with the growth of the utilization of Facebook as a virtual learning community.

Hilscher (2014) argued that in colleges and universities, the use of Facebook is beginning to incorporate actions that were traditionally aligned with the learning communities that were not virtual. This new definition could be described as a way for educators and students to maintain contact while incorporating aspects of traditional learning communities.

At King Abdul-Aziz University, Mrs. Hayat Alguraibi (by the researcher, 2013) reported that she designed with her students who enrolled in social studies courses a Facebook page to post and exchange opinions, slogans, and posters that her students designed to convey ideas related to some social issues in Saudi society. Aydin (2012) argues that the rise in usage of social media in general and Facebook in particular makes

it a tool that is being utilized in great numbers by college students. However, students' utilization of social media for academic and learning purposes still need further investigations in order to harness such technologies for educational goals and help those digital natives meet their interests. Bonk (2008), O'Reilly (2005), and Teng et al. (2009) concluded that there are more and more people who use YouTube as a tool to learn, but there is not much empirical data to understand this phenomenon.

Social Media and Learning—E-Learning Web 2.0

In 2012, Hrastinski and Dennen argued that while most learning experiences are a blend of both formal (structured learning) and informal learning (online learning/ personal learning), social media tools are also inherently enabling informal learning experiences in higher education. Selwyn (2007) concluded that there is growing evidence that social media is increasingly supporting informal learning at home and in the community and that informal learning is becoming a vital element of education for learners of all ages. Hall (2009) also suggested that formal and informal learning should be connected to optimize learning and that learning is most effective when the learner engages in both formal and informal learning activities. Attwell (2007) suggested that informal learning, which rests primarily in the hands of the learners using social media tools, can be used to supplement formal learning—classroom learning, and play an important role in advancing the understanding of e-learning.

Harrison (2011) examined whether college student participation in a blog helped reinforce classroom learning by extending communication outside class hours. Findings of the study revealed that students perceived the use of blogs as an outlet for thinking about class topics beyond the weekly class meetings both individually and in

collaboration with peers through blog commentaries. The results reflected that blogging helped students direct their own learning, increased engagement in course materials, and promoted the development of informal learning communities.

Ebner et al. (2010) examined whether the use of microblogs facilitated process-oriented learning and subsequently informal learning in higher education. Findings of the study revealed that students used microblogging for private informal communication as well as for more formal project-oriented communication to support social interaction in group work. Informal communication facilitated through microblogging was also an important factor in encouraging students to adopt more formal uses of microblogging. In the continuous adoption of social media by the net generation, several studies have concluded that social media have positive impacts on youth's learning.

According to Huang et al. (2013), the effect of web 2.0 technologies on learning could be derived from three categories of applications. The first category mainly supports reading and writing activities in a reciprocal and collaborative manner. Technologies in this category include blogs and wikis. The second category supports learning in a highly interactive and complex environment. In these environments, learners must interact with other learners and the interactive system in order to explore and obtain new information. Learners through this category practice a great degree of control in the decision-making process. Examples of web 2.0 application that support this category are online games and immersive learning environments such as Second Life. The third category is often known for its social support for users through a variety of media representations. Some technologies that support this category include social networking tools and online videos sharing tools.

Ito et al. (2010) argued that youth use different sites and communication technologies to stay in social connection and arrange real –life gatherings, and develop their learning such as MySpace and Facebook, Instant Messaging (IM) and text messaging. Youth use social media to search for information and knowledge related to their specific major or general information of other fields. Rainie and Tancer (2007) reported that nearly 46% of those aged above 18 who are currently full- or part time students in the USA have used Wikipedia to seek information. Rainie and Tancer (2007) also reported that Wikipedia attracted six times more traffic than the next closest site in the educational and reference websites categories.

Chayko (2008) argued that 97 percent of her interviewees reported using online or social networking technology for some practical useful purposes. Participants reported using technology for learning, information gathering and scientific and academic inquiry. They use online and mobile technologies to locate a piece of information at the exact moment. Chayko also indicated that people both seek and provide information to one another in massive amounts. Most of her participants reported that they could get answers to their questions and pursue knowledge and information anywhere at any time.

Bonk (2008) stated that, “it is clear that the use of YouTube Videos in instruction is linked to educational and psychological research” (p.5). Bonk argued that YouTube videos provide a context for learning and increase learners’ retention of information through visual and auditory information rather than the traditional textual and auditory. YouTube videos also enable learners to share learning experiences through reflection on the subjects. In addition, YouTube videos endorse learners’ participations since learners actively create, watch, share videos and exchange their reflections (Bonk, 2008).

Wikis as other example of social media allow students to interact with the other synchronously and asynchronously, collaboratively solve problems at their own pace, provide immediate feedback to each other, clarify misunderstandings, and construct their knowledge objects (Huang & Nakazawa, 2010). Henry Jenkins (2009) also argued that participants use social networking sites such as Wikipedia or alternative reality gaming to complete their tasks and develop new knowledge while collaborating with one another. This collaboration produces a new culture of participation through learning by using technologies, which Jenkins called "participatory culture." This participatory culture emerges as the culture absorbs and responds to the explosion of new media technologies that make it possible for average consumers to archive, annotate, appropriate, and recirculate media content in powerful new ways.

Pierre (2009) concluded that individuals connect online to embrace common activities that involve accessing and processing information. In this process, *Collective Intelligence,* users collaborate by sharing information that some of them have and some do not, and the group as a whole works to complete the project. Also, participants are pooling knowledge and comparing their ideas and notes with each other toward a common goal through this collective intelligence process.

Furthermore, debating ideas and writing comments through social media and software develop the learners' critical thinking skills and help them to freely express themselves. Chiu (2009) argued that it is necessary to help students engage in critical thinking online by asking students to evaluate the information obtained from Wikipedia. Chayko (2008) argued that social networking technologies enable users to become more critical learners as well. When learners use numerous resources and share these resources

they develop a deeper, more focused approach to learning. Cress & Kimmerle (2008) concluded that the wiki structure and the contributing process require users to participate and critically evaluate information, to synthesize information objects with different formats, and to work independently and collectively with peer contributors.

Moreover, social media technologies develop students' literacy in some aspects and enrich learners' vocabularies and language skills. When youth interact via Facebook, for instance, with other people whose vocabularies or grasp of English is different from their own, they may encounter words or slang that they do not understand. Encountering these different words and slang terms might encourage them to broaden their horizons and increase their overall vocabulary and understanding of other cultures.

Chayko (2008) argued that it has been proposed that children who use abbreviations while texting on their phones or communicating via social networking sites learn language skills in accessible, enjoyable ways. Chayko concluded that children who text more often score better than their counterparts on reading, writing, and even spelling tests. Ito et al. (2010) identified certain literacy practices that youth in this era have been central participants in defining: casual forms of online speech, social norms for how to engage in social networking, and new genres of media representation such as machinima, mashups, remixes, video blogs, web comics and fansubs.

Also, James Paul Gee's (2003) findings suggested that video games such as *Deus Ex* could provide engines for vocabulary development and vocabulary acquisition. When players participate in a large gaming community, they can develop new sources of vocabulary in meaningful contexts by participating in these games. "Kids, who play real-

time strategy games like *Civilization*, start to look for books on ancient cultures and gain better scores in middle school," according to Kurt Squire and James Paul Gee (2005).

Moreover, Collins and Halverson (2009) believed that technologies offer interesting ways of enabling the transition between basic and applied literacies. They argue that Massive Multiplayer Online Games (MMOGs), for instance, contribute to making this transition. This argument emerged from the fact that people who play MMOGs, such as *World of Warcraft* or *Lineage*, use basic literacy practices to develop a wide range of other applied literacy skills, such as negotiation, bargaining, forming alliances, strategizing and outwitting opponents, and communicating with other people. These applied literacy skills are not easy to maintain in traditional school environments, as Collins and Halverson argued, while they occur naturally in MMOGs.

Huang, Huang, and Tschopp (2010) argued that online games are able to provide sustainable motivational support that not only initiates the learning process but also engage learners through iterative learning cycles.

Other studies concluded that social media tools such as virtual worlds (e.g., Second Life) help students to develop their language skills. Seo (2013) stated that when students use Second Life for learning, the ability to connect with other students, who are native speakers, has a clear advantage over interactions to include multiple channels of communication, through audio or text, and it uses the virtual world to try a place that is not really present. Second Life as one of the online social media tools allows language learners to connect with people from the target language, to practice their speech and writing abilities, and to imitate what takes place during regular conversations using virtual reality. Jamaludin, Chee, and Ho (2009) concluded that online immersive virtual

environments, such as Second Life provide an exploratory way for students to participate. Through role playing, students would perceive strong support for developing argumentative knowledge in Second Life.

Moreover, social media contribute to developing students' learning by inciting their motivation to learn and providing them with more chances to meet and improve their interests. Collins and Halverson (2009) argued that learning technologies provide teachers with some guidance about how to develop students' learning by improving their motivation. Collins and Halverson believe that improvement in the learners' motivation could be achieved by giving learners the opportunities to control their own learning and allowing them to choose the tools that support their own learning. Many learning technologies enable the learners to take more responsibility for their own learning. These tools include access to the web, machines that teach reading to the toddler, tutoring for students who have learning difficulties and educational online games that develop the learners' critical thinking abilities.

Mazer et al. (2007) studied the effect of instructors' self-disclosure via Facebook on students' motivation, affective learning, and classroom climate. Findings of the study showed that Facebook has positive impact on students' motivation and engagement in the learning process. Students also used the personal information to identify areas of connection with teachers and enhance their communication and engagement in the learning environments. Also, in 2010, the Center for Community College Students Engagement (CCCSE) report revealed that 95% of the students (age 18-24) are using social networking websites. The CCCSE report also found that students who used social

networking for academic purposes reported higher levels of engagement than those who did not use such technologies.

Also, Collins and Halverson (2009) argued that technology tools could open up spaces for alternative discussions. Students who find it difficult to participate in class and express their perspectives can use online discussions where they can feel more comfortable to express their ideas and know their classmates. Harter (2011) argued that on Facebook, "Wall posts serve as a place to express your thoughts, ask for advice, help with an issue, or just keep friends up-to-date with your daily life." Chayko (2008) also indicated that the lack of visual cues can encourage disinhibition which helps the learners to become more deeply involved in portable learning communities than in the traditional one.

Social media technologies also provide learners with social support for learning. According to Wenger and Lave (1990), and Vygotsky (1978) learning arises when it is socially situated as learners are involved in learning groups and communities. Web 2.0 applications support situated learning because it allows learners to participate in communities, to communicate with others, and to edit their own contents (Mason & Rennie, 2008). YouTube provide their users also with social support for learning. Balcikanli (2009) concluded that YouTube can be used as an effective tool to support students' language learning. This is because YouTube is easy to use and it connects to a large quantity of video clips that teach languages and demonstrate cultural contexts in which the language can be properly applied.

Hoffman (2008) also concluded that students used Facebook to extend their off-line community to their online meeting and relationships where there are strong social

ties developed through the use of Facebook. In addition, the social aspects provided through the use of social media technologies can be developed through building communities while learning online. Kear (2007) found that students preferred asynchronous communication to create online communities and establish identities for themselves rather than synchronous ones which require them to participate at the same time.

Social Media, Arab Spring, and Saudi Arabian Culture

Although many of the studies have been conducted in western countries related to the changes that social media have brought about to people's lives in general and particularly in the education field, few have been administered in the Arabic world. Studies have revealed that social media have continued to emerge and grow in Arab countries. "The number of Facebook users has risen significantly in most Arab countries, most notably so in the countries where protests have taken place," as cited by the Arab Social Media Report (2011). It is obvious that social media have played a significant role in the political side of some of the Arabic countries such as Tunis, Egypt, and Syria. Social media completely changed people's beliefs in such countries. Social networks such as Facebook, Twitter and YouTube participated in upraising the Arab spring and revolutions and help people alter their ways of thinking and influence their minds and perspectives toward life. According to the Arab Social Media Report (2011), "The growth of social media in the region and the shift in usage trends have played a critical role in mobilization, empowerment, shaping opinions, and influencing change".

In addition to the roles of social media in the Arabic political aspects, social media have helped people develop their social skills and open up many opportunities for

socialization. According to Hanan Aifan (2010), "Facebook helps Saudis to reinforce existing interpersonal relationships with their friends, reconnect with old friends, and enable its users to build new relationships with new friends and socialize with others."

Though the impact of social media on the Arab social and political fields cannot be denied, there are few studies investigating the effect of social media on the Arabic educational culture and field. As Saudi Arabia is one of these countries and is a conservative and closed society, studying changes and impacts of incorporating social media technologies into Saudi educational culture is a very crucial one. This study becomes vital especially in this era where we cannot deny the fact that our students are in the virtual worlds using social media in their everyday practices and activities. According to Caruso and Salaway (2008), technologies emerge, Net Generations enthusiastically adopt them as soon as they perceive the benefits that these technologies will provide for them.

Rogers (1960) concluded that technology adoption always brings about cultural change. Thus, an adoption decision is, in the sociological sense, a change in *normative expectations* (i.e., rules for behavior). Adoption, therefore, is not always a simple process, wherein the new technology is incorporated within the society with very little change to structure and culture. Sometimes, structure and culture must change considerably to adopt, and the public requires assurances from opinion leaders to make such a change. However, as social media are Internet web-based tools and applications, where they provide new platforms for people to interact and communicate, studying the changes these tools brought about to the Saudi social and educational culture is imperative.

One of these changes is that in a conservative society such as the Saudi one, where sharing personal photos online is prohibited or at least unwelcomed from most of its families, and in particular for Saudi women, one's personality becomes more public through the adoption of social media technologies. Consequently, investigating how Saudi students and instructors see these tools are changing the Saudi culture of education and learning. Such studies are crucial in these days where we cannot ignore the truth that our children become more and more attachable to technologies and our youth are already in these virtual worlds using these emerging social tools.

However, there are studies that have been conducted in Arabic countries, especially in Saudi Arabian universities, about how social media technologies have changed education and the way people learn and get information. Al-khalifa (2008) at the University of King Saud, Riyadh in the Educational Technology Department, integrated blogs into her teaching strategy to manage the content of some courses and open the communication and discussion channels between the teachers and the learners. Results of the survey that has been conducted showed high satisfaction from students about using blogs as tools that support their connections to their teachers.

Another study conducted by Salem and Al-Ghamdi (2011) at the University of Um- Al Qura, Makah, revealed that using teaching strategy which depends on applying blogs positively affected students' critical thinking skills, and the learning lasted for a long period of time. Blogs provided the learners with environments characterized by freedom of the learners' thoughts where learners could control their learning and become self-directed learners.

In addition, Al Madhouni (2011) conducted a study to investigate the effectiveness of using instructional blogs in improving Al Qassim University students' academic achievements, and also their attitudes towards the instructional blogs. The quasi-experimental research design based on pre-post experiment design for two groups (experimental and control) was also used. The experimental group studied the selected chapters using the instructional blogs while the control group students studied the same content through the traditional lecture method. The findings showed a significant difference among the two groups: the experimental group scored higher than the control group in the academic achievement test about the innovative instructional technology chapter, individualized instruction, the comprehensive achievement test, and the attitude scale.

An additional study was conducted by the researcher Al-Kathlan (2011) to investigate the effectiveness of using a Podcast application to develop students' speaking skills in English as a second language for high school students at Jeddah city through the year of 2009-2010. Students were divided into two groups: an experimental group who used the podcast and a control group who used the traditional technique. The findings showed that students who used the podcast performed better than those in the control group with the traditional method.

However, as online classes increase at Saudi Arabian universities and social media continue to emerge, it is important to understand how these technologies change Saudi culture of education and learning, and how Saudi students perceive that these emerging tools have altered their learning practices and culture. According to Oblinger (2005), it is important for educators to understand that the Net Generations are

forerunners of change. Their early exposure to technology has had effects on their habits and expectations of learning and is changing the culture and norms of society.

Investigating which social media technologies Saudi students use or expect to be included in their learning environments to support their learning is very imperative. Spanier (2000) concluded that rather than college faculty assuming what the students need and want from technology to enhance online learning, faculty should be aware of the technologies students perceive as beneficial in learning environments. Instructors who teach in these environments need to know how to use these tools effectively in order to enhance their teaching and help their students support their learning. "Faculty needs to have a greater perceptive of the Net Generation technology expertise and how student learning is connected with technology; this is a vital component for higher education," according to Lohnes & Kinzer (2007, p.7).

As online classes and electronic learning are growing more and more in the Saudi universities, helping Saudi students and instructors overcome the challenges of incorporating and utilizing social media technologies effectively into the teaching and the learning environments to assist students support their learning is a critical goal. Additionally, understanding Saudi students' attitudes and expectations of using social media tools to support their learning requires further studies and investigations in order to harness these technologies successfully into students' learning environments, and help Saudi instructors understand their students' needs and interests. This understanding will help the instructors to think of methods of how to incorporate emerging tools such as social media into their teaching environments in order to support students' formal learning.

People's Attitudes toward Using Social Media for Learning

Attitude, Preference, and Perception are three terms used interchangeably, and many times it is hard to distinguish between them. The term "attitude" refers to a positive or negative feeling towards any specific topic, and it is a belief in or emotion toward a fact or idea. The term "Preference" is defined as making a choice between different alternatives. "Perception" is the result of studying something. However, there are several theories studying people's attitudes toward an innovation or an idea. For the current study, the researcher postulated the study hypotheses according to the social theories of Vygotsky and Bandura, Technology Acceptance Model (TAM) by Davis, The Innovation Diffusion Theory (IDT) by Rogers, and Theory of Reasoned Action (TRA) by Fishbein and Ajzen.

Social Learning Theories

Bandura's (1977) theory of social learning and Vygotsky's (1962) are theories emphasizing that all learning is social. Bandura's (1977) theory is acknowledging that gaining new knowledge is a labor intensive process and that social learning lessens the amount of labor required. Using online web-based technologies and applications, such as social media for social learning to decrease the amount of labor required to acquire knowledge, is a logical step. When interacting using social media technologies and applications, students can share information and acquire new knowledge. These online connections and socialization using such tools facilitate social learning from Bandura's and Vygotsky's perspectives. Therefore, students' utilizations of social media tools to support their learning adheres to both Bandura's and Vygotsky's theories of social learning.

Social media technologies allow learners to build relationships and create groups. Members of these groups share information, knowledge, and ideas. According to Hilscher (2014), as the first initial moments of knowledge sharing occur, others within the group will see the increase of both social capital and knowledge sharing, and will endeavor to be part of that knowledge sharing, according to Bandura and Vygotsky. Hilscher stated that, "Once the users see that there is reciprocity, then truly deep and effective knowledge sharing may occur" (p. 17).

Working online with each other via social media technologies as one group by sharing knowledge creates a society which teaches and develops the learners' social interactions. According to Hilscher (2014), "As a group in the process of learning, they exhibit what Vygotsky described as existing within an evolved society that teaches social interactions. Those social interactions, according to Vygotsky, are fundamental to the acquisition and use of new knowledge" (p.7). In addition, Lo (2013) stated that, "On Web 2.0 platforms, social interaction takes place between individuals as well as groups. Such a function allows users to co-create and co-manage an existing database, creating more spontaneous and effective communication over Internet" (p.23). Hilscher (2014) indicated that one of Facebook features is messaging which facilitates interaction and communication among students. Students communicate using Facebook messaging through a combination of posting questions to the group, instant messaging, and e-mail. This social interaction allows the learners to become immersed in a virtual learning community.

Hilscher (2014) stated that:

> The communication styles, the capabilities of multiple types of communication, and the ability for users to easily switch between roles are important aspects of Facebook's ability to be a valid virtual learning community. The aspect of knowledge sharing on Facebook is another important aspect of the validity of Facebook as a virtual learning community. Facebook provides the ability to create a group, and within that group there are three levels of security. By segmenting Facebook into groups, the number of social participants is decreased while allowing for an increased amount of security. Increased security leads to a buildup of trust. As trust increases, users feel more likely to share their knowledge with the group (p.6).

Eun (2008) summarized Vygotsky's (1962) sociocultural theory of development by stating that, "the individual mental functions arise from specific social interactions and retain a social nature even in the most private spheres of human consciousness" (p. 135). Vygotsky's sociocultural theory of development maintains that acquiring higher level mental functioning requires social interaction with a targeted purpose (Hilscher, 2014). Thus, social media tools provide the learners with the social nature necessary for their learning development, which provides a green light for educators of the possibility of using such technologies as educational tools to support students' learning. Swan and Shea (2005) indicated that students perceive themselves as interacting socially in online environments and that this social interaction was meaningful to their learning.

Vygotsky's social learning theory (1962) also argued that the act of individuals interacting with each other is a key component in the development of knowledge. Hew (2011) indicated that students spend between 10 and 60 minutes on Facebook daily

interacting with their friends. As they are already using social media tools for their daily interaction, there are possibilities that students develop their knowledge by learning socially with the other. Thomas and Brown (2011) argued that web 2.0 social networking sites such as MySpace and Facebook create connections among users that allow interaction with others who have similar interests. These friend-to-friend networks facilitate a collective sense of belonging based on the users' personal interests and ideas. People with digital media are not only learning from one another, but also learning with one another and sharing experiences as well as knowledge. Collins and Halverson (2009) concluded that in such sites, people learn by lurking or they develop their knowledge by asking questions.

Vygotsky (1962) also emphasized that all learning starts out as social in nature. He stated that, "any higher mental function was external and social before it was internal" (p.197). This is applicable to the use of social media technologies by students since these tools are external to the learners and facilitate social platforms for the learners to socially engage, participate, and learn from and with one another. Hilscher (2014) stated that, "Facebook provides an open framework that allows every member to be searched by any other user of Facebook. The sheer openness of Facebook certainly fulfills the open social portion of Vygotsky's social learning theory" (p. 14). Social media are being increasingly used as tools for developing formal and informal learning spaces or experiences that start out as an individual learning platforms, enabling individual knowledge management and construction, and evolve into social learning platforms or systems where knowledge is socially mediated (Dabbagh & Reo, 2011b; Johnson et al., 2011; Mcloughlin & Lee, 2010; & Minocha & Kerawalla, 2011).

Bandura's (1977) social learning theory is contributed to Vygotsky's (1962) theory. Bandura stated that:

> Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action (p. 22).

Bandura's theory focused on the modification of psychology and behavior of the learners. Bandura believes that learning is accomplished through social modeling. Modeling required for social learning is based on four components, as cited in Hilscher (2014):

1. Attention: One must pay attention in order to learn.
2. Retention: Retention of the new behavior must be established.
3. Reproduction: One must demonstrate the new behavior. Repeated practice of the behavior is important in this phase.
4. Motivation: One must feel motivated to repeat the behavior in order for successful learning to have occurred.

Completion of all of these four components enables the learner to learn new behavior successfully. New learned behaviors accomplished from social learning, as emphasized by Bandura, can also be found in the use of social media technologies by students for learning purposes. These emerging technologies contribute to the distribution of new learned behaviors by socializing with the other through these platforms, support learners

with immediate feedback, and provide incentives that promote the reproduction of new behaviors. According to Hilscher (2014), "As a social tool, Facebook has the ability to disseminate a behavior and provide the necessary feedback and rewards that encourage the reproduction of behaviors" (p. 15).

Theory of Technology Acceptance Model (TAM), Theory of Reasoned Action (TRA), and Diffusion of Innovations Theory (IDT)

Most studies of people's attitudes towards using technology in general and particularly in the field of education are built based on Davis' (1989) Technology Acceptance Model. This theory models how users come to accept and use a computer-based technology. TAM suggested that when users are presented with a new software package, a number of factors influence their decision about how and when they will use it (Masrom and Hussein, 2008). TAM states that individual's adoption of information technology depends on two main factors, which are perceived usefulness (PU) and perceived ease-of-use (PEO) of the technology.

Another theory is Theory of Reasoned Action (TRA), which was developed by Fishbein and Ajzen (1980) and concerned with the determinants of intended behaviors. In the social psychology literature, TRA defines relationships between beliefs, attitudes, norms, intentions, and behavior. When TRA is applied to explain use of adoption behavior, it embraces four fundamental concepts include: Actual Behavior, Behavioral Intention, Attitude, and Subjective Norm. According to TRA, as cited in Masrom and Hussein (2008), "individual behavior is driven by behavioral intention where behavioral intention is a function of an individual's attitude toward the behavioral and subjective norm surrounding the performance of the behavior"(p.7).

A third theory on which this study depends is the Innovation Diffusion Theory, which was developed by Rogers (1995). IDT sees innovations as being communicated through certain channels over time among the members of a social system. The theory suggests that there are four fundamental elements that influence the spread of a new idea and the adoption of technological innovations: the innovation, communication channels, time, and a social system. Rogers defined innovation as "an idea, practice, or object that is perceived as new by an individual or other unit of adoption" (p.11). However, in this current research, the innovation is social media technologies as learning tools that Saudi students use for learning purposes to support their learning.

Studies have been conducted to understand factors that influence people when adopting and using emerging technologies. Rogers (2003) conducted a study to investigate factors that affect users' attitudes toward adopting technology. The results showed that the higher the perceived usefulness, ease of use, and compatibility of the technology, the more positive the attitude toward using the technology. Davis (1989) concluded that perceived usefulness had a significant and strong effect on attitude, while ease of use had smaller but also significant effect on attitudes toward adopting electronic mail. Masrom and Hussein (2008) also conducted a study to investigate factors influence the users to adopt electronic collaboration technology. Findings of the study showed that perceived ease of use of the electronic collaboration technology has a positive impact on perceived usefulness. In addition, the results showed that perceived usefulness of this technology has significant impact on the electronic collaboration technology usage. Another study conducted by Masrom and Hussein to study people's acceptance of online shopping applying the Theory of Reasoned Action (TRA) by Ajzen and Fishbein

revealed that subjective norm positively influences participants' attitudes to shop online. Additionally, attitude was the most significant predictor to shop online. Moreover, studying users' attitudes toward adopting online banking applying the theory of Planned Behavior (TPB) revealed that attitude of the users was significant determinant of behavioral intention toward online banking.

In addition, Hartshorne and Ajjan (2008) conducted a study to explore students' attitudes to adopt web 2.0 technologies. Results of the study revealed that attitude is the strongest determinant of students' behavioral intention to the use of web 2.0. Also, the findings showed that behavioral intention was a strong determinant of actual behavior or usage of web 2.0. Furthermore, the results revealed that students' attitude to use web 2.0 technologies were influenced by perceived usefulness, ease of use, and compatibility of web 2.0. Another study by Shittu et al. (2011) has been conducted to understand what influences people to use emerging technology. This study revealed that perceived ease of use, perceived usefulness, and subjective norm are significant predictors of students' attitude to the use of social software. Additionally, students' attitude was stronger in determining intention to use social software.

However, most of the studies that have been conducted to examine people's acceptance and adoption of social software or web 2.0 technologies were for users' attitudes toward using these tools for social communication or interaction. Few studies have been administered to examine people's attitudes toward using social media for learning purposes. One of these studies is a study conducted by Wang et al. (2012) to examine course participants' attitudes toward using social media to improve Continuing Medical Education (CME). Findings of the study showed that the CME course

participants have positive attitudes toward using social media for educational purposes. The CME course participants' favorable attitudes toward SM were associated with younger age (20-29 years), using SM frequently, and professional degrees (e.g. PhD, MD, etc)

Obaid (2011) conducted a study at Al Imam Mohammad Bin Saud University, Riyadh, to investigate computer science students' attitudes toward using social networking sites to support their learning. Results of the study revealed that students use social networking sites to communicate with others but their usage of such tools are just for social communications more than for learning purposes or academic connections. Findings of this study also showed that students are not trusting or believing in the importance of social networking sites as sources for supporting learning and they don't intend to accept the idea of participating effectively in such sites to support their learning. Additionally, the results revealed that the instructors are not connecting their personal websites or their academic websites to the social networking sites.

Social Media and Gender Differences

Many studies have focused on gender differences and their impact on the Internet usage and web-based applications. Gender differences are related to the usage of the Internet and attitude toward using the Internet as well (Jackson, Ervin, Gardner, and Schmitt, 2001).Some studies have revealed that males are more competent and have more experiences in using the computer and the Internet than females (Durndell & Thomson, 1997). Kayaoglu (2012) also concluded that males have more positive attitudes towards technological aids and computer use whereas females do not feel as confident as males. Also, Shashaani (1994) concluded that male students have more experiences with

computers and more positive attitudes than female students. Sherman, End, and Kraan (2000) concluded that gender differences among college students' usage of the Internet remains observable. While female students tended to access the Internet more often for emails or school-related activities, male students used the internet for entertainment.

Li, Kirkup, and Hodgson, (2001); Sherman et al. (2000); Jackson et al. (2001); and Joiner et al. (2005) revealed that females might have much higher anxiety, less competence, and a less positive attitude toward using the Internet and its applications than males. Herring (2009) concluded that females posted more frequently and posted longer messages in an online forum. These findings, as Lenartz (2013) argued, are different from the previous findings which showed that men were found to talk more in public settings using traditional methods of communication. However, other studies concluded that there was no significant difference between genders' usage of the Internet for communication.

In addition, when using the Internet for learning purposes, the gender difference is still observable among the two genders. Wang et al. (2009) revealed that in mobile learning settings there was a gender difference on the integration of mobile learning among general users. Selwyn (2007) revealed that gender differences remain a strong concern for the participation in electronic learning among college students. Selwyn found that male students' participation could be inhibited by the "feminine qualities" of e-learning environments such as using the online chat room and emailing.

However, there is a relationship between people's usage and adoption of social media technologies and gender. Gender appears to be one of the important factors in using educational technology and determining the choice in social networks. Studies also

have concluded that there are gender differences when people intend to use web 2.0 technologies. In their study, Huang et al. (2013) concluded that there were significant differences between genders on six web 2.0 applications (blogs, wikis, social networking tools, online video sharing tools, online games, and immersive virtual environments). The study revealed that overall females felt more anxious when using web 2.0 applications than males. However, such a difference was not found on social networking tools and online video sharing tools. Huang et al. stated that, "Even though students already use a variety of web 2.0 applications on a daily basis, females may not utilize them efficiently for gaining new knowledge or developing new skills. If so, females could lose many formal and informal learning opportunities made available by Web 2.0 applications" (p.57).

The impact of social media on gender roles needs more investigations in order to better understand gender differences in online learning using social media technologies. According to Mossberger et al. (2003), in the increasing usage and access to the Internet, where the Net Generation exposes early to the computer and the Internet applications and services, gender differences might be diminished and the gender digital divide would be minimized.

However, gender differences do not exist only among students but also among instructors. It has been argued that there are gender differences in technology adoption by faculty. Cockburn and Ormond (1993) claimed that technology has traditionally played a gendered role in the western society. In the area of information technology, males are the main designers and developers. Thompson and Lynch (2003) reported that compared to

women faculty, men were significantly more likely to express confidence in their ability to organize and execute courses of internet actions.

Zhou and XU (2007) also concluded that male faculty has advantages over female faculty in their skills, perspectives, and use of educational technology. Their results suggested that females were more likely to use student-centered pedagogical approaches in teaching than males. Male instructors might have greater expertise and feel more confident in the use of computers than females. On the other hand, females tended to learn how to use technology from others, whereas males were more likely to learn from their own experience.

In the United Arab Emirates, Almekhlafi and Almeqdadi (2010) conducted a study to investigate teachers' perceptions of technology integration into their teaching. Results of the study showed that female teachers integrate technology in their classrooms more than male teachers do, which is not surprising given that female teachers were more concerned about technology availability than male teachers.

However, as very few studies have been conducted in the area of whether or not gender differences exist in faculty use and adoption of technology, investigating these differences in depth is very crucial in this digital era.

Social Media and People's Age

Researchers concluded that users' age predicts their attitudes toward using technologies such as computers and the Internet. According to Czaja et al. (2006), although older adults in the United States are increasingly using technology, data indicate that they typically have more difficulty than younger people in learning to use and operate current technologies such as computers, the Internet, videocassette recorders,

automatic teller machines, and telephone menu systems. Also, the use of computers and the Internet is lower among older adults, minorities, disabled people and those with less income and education. Therefore, a digital divide still exists for certain segments of the population such as the older generation. Although technology is being rapidly produced and deployed in most settings, the older adults in the sample reported less use of technology in general and less experience with computers and the World Wide Web.

Furthermore, Pew Internet and America Life Project, (2004) reported that seniors who use the Internet for information searching and emailing report lower rates than younger users do. Some of the reasons that Pew Internet and America Life Project revealed why older people do not use computers and the Internet include: costs, lack of skills, concerns about privacy and security of information, lack of access to the Internet, and lack of knowledge. Also, Porter and Donthu (2006) found that people's age was associated differentially with their beliefs about the Internet, and that these beliefs influence a consumer's attitude toward the use of the Internet and its applications. Additionally, Wang et al. (2012) concluded that students' favorable attitudes toward social media utilization for education purposes in the medical courses were associated with younger age.

However, there are other studies which concluded that there are opposite patterns for age differences in the students' perceptions of using technology for learning. In Hong Kong, Yau and Cheng (2012) conducted a study to understand how age differences affect students' perception of technology usage. The findings showed that older students had more confidence in using technology for learning than younger students.

Social Media and Saudis' Conservativeness

Saudi Arabian Culture in its very nature is religious; Islam plays central roles in shaping the culture. In addition, the segregation of sexes influences the social and public life, where women are not permitted to mix with unrelated men. (AlMunajjed, 1997, Ember, 1998; & Wheeler, 2000). Saudi Arabia is a conservative society where alcoholic beverages, gambling, drugs, and prostitution are forbidden in Islam law (Al-Furaih, 2002). Moreover, in this culture people should uphold shyness, especially the women, and family ties are priority; particularly the blood bonds ties and relationships (Al-Saggaf, 2004).

According to Almobarraz (2008), Saudi Arabia's late connection to the Internet has been attributed to the nature of the country's people. The Internet as an open source contains much information that is uncontrolled by any organization. Therefore, Saudi people do not want forbidden objects to be accessed by the community. Consequently, services of the Internet were delayed in order to find an effective filtering system that can block disallowed web sites. Therefore, all requested websites from Saudi Arabia Internet Services Providers (ISP) must go through an Internet Services Unit (ISU) proxy, which supervises and filters the connection point of the Internet in Saudi Arabia. If any user tries to access a prohibited web site, he or she will be directed to another page notifying him or her that the website or web page is inaccessible.

However, the filtering system, as Almobarraz (2008) cited, prohibits Saudi people from accessing certain contents of the Internet by managing the gateway used by all local Internet service providers. Blocked web sites include pornographic web pages, pages related to drugs, bombs, alcohol, and gambling, and insulting the Islamic religion or Saudi Arabia Laws and regulations (ISU, n.d.). The ISU was initially in charge of

maintaining the censorship system. This mission was transferred to the Saudi Telecommunication Company (STC) in 2004 to compare whether or not the requested pages are included in the black lists. These black lists are purchased from commercial companies and renewed on a continuous basis throughout the year. Then, the commercial list is enhanced with various prohibited web sites added locally by trained staff. When the users request a page included in the black lists, it is dropped; otherwise the request is executed, according to Almobarraz (2008).

Despite the blocked web sites and the censorship system that Saudi government manages and entails, people in Saudi Arabia use and interact intensively with social media technologies and the Internet web-based applications. According to Perlov and Guzansky (2014), the number of active internet Saudi users has grown by 300 percent since 2012. “One-third of Saudi citizens are today regular users of social networks, and the number of Twitter and YouTube users in the kingdom is the highest per capita in the world, which indicates how “connected” the kingdom’s residents are”, said Perlov and Guzansky (2014). The average age of Saudi users who use social media ranges from 26 to 55, with male users (87 percent) far outnumbering female users (perlov & Guzansky, 2014).

However, Perlov and Guzansky (2014) cited that, “According to a poll conducted in the kingdom published in December 2013, 20 percent of Saudis use the internet for reading and watching religious content, while only 8 percent do so for “political purposes” (p.1). Also, Perlov and Guzansky argued that the conservatives, radical forces, and religious clerics are more dominant on social networks in Saudi Arabia. These different groups use them for indoctrination, mobilization and as a platform for public

messaging. Perlov and Guzansky said that "Indeed, most social network users in the kingdom are consumers of religious content" (p.1).

This means that Saudis as conservatives use and believe in the importance of social media technologies as most of them use these online tools for their Islamic religion. As Perlov and Guzansky indicated, the radical clerics are the largest and most popular group in Saudi Arabia whom Saudis follow in social networking sites, such as Twitter. Perlov and Guzansky cite, "Each of the three leading preachers, Sheikh Salman al-Ouda, Sheik Muhammad al-Arifi, and Ahmed al-Shugairi, has between 5-7 million social media followers" (p. 2).

However, Perlov and Guzansky (2014) argued that the official religious establishments see social media users as a real threat that requires close monitoring and censorship, especially regarding content that is damaging Islam and against the religious values. One example that Perlov and Guzansky (2014) provided is the mufti of Saudi Arabia, Abdul Aziz al-Sheikh, strongly criticized Twitter users, describing them as "a bunch of clowns" who are making use of the tool "to corrupt values and to spread lies and rumors" among Saudis.

However, several researchers have demonstrated that the Internet positive impacts on the Saudis' personal and social lives. Using the Internet has led Saudis to become more open-minded and accepting others' views. Moreover, the Internet increases Saudis' awareness, especially the women, when dealing with others. Saudis also become less inhibited about, and more appreciative of, the opposite gender. Furthermore, the Internet has created communication channels between the two genders. Women's voices also become heard and their self-worth increases and they gain a sense of importance.

Moreover, the Internet supports the Saudis with more self-confidence and self-esteem (Al-Saggaf, 2004).

Additionally, Saudi women who focused on new knowledge, such as women who work in the science field, are less likely to see the Internet as a danger and more likely as a powerful tool for work enhancement. Those women also perceived the Internet as providing them with the opportunities to collaborate with colleagues. Nevertheless, Saudi women reported that the proficiency in the English language is necessary for effective use of the Internet. They also emphasized that they need to learn specific skills associated with the use of the Internet (Al-Kahtani, Julie, & Jefferson, 2006).

Moreover, the Internet usage affects other social and personal patterns of Saudi behavior, in particular, watching T.V., reading books and talking on the phone. The internet usage also helps Saudis become more connected to their families. Furthermore, the medium is helping people to become more connected to like–minded people, in particular, people in the same profession and people sharing similar hobbies (Sait, Ali, Al-Tawil, and Sanaullah, 2010).

Even though the Internet has positive effects on Saudis' lives and personalities, it also negatively impacts Saudis' offline lives in ways that are against cultural values. Saudis neglected family commitments and friends. They also became less shy, particularly females, who became more talkative and outgoing. Additionally, Saudis became intellectually confused about aspects of their culture and religion (Al-Saggaf, 2004).

Although the Internet has some negative effects on Saudis' lives, the positive effects of the Internet on aspects of Saudis' social lives outweighed the negative effects

(Al-Saggaf, 2004). However, the more conservative elements of society see more danger and shortcomings in the Internet access than benefits (Al-Kahtani, Julie & Jefferson, 2006).

Barriers to Use Social Media for Educational Purposes

There are some barriers that students face when utilizing social media for learning in particular and other different purposes in general. These challenges include the following:

Prior technological knowledge. According to Seo (2013), there is a relationship between students' prior experience with social media, their technical skills, and attitudes towards social media. Seo states that students with substantial gaming experiences exhibit high technical skill in Second Life, a virtual world, as one example of Social media tools. Seo argues that teachers must resist the assumption that all digital natives share equal expertise in all digital online interactions, as there are gaps in computer knowledge and experience.

Access to computers or the Internet . Access to computers, the Internet, or online programs is another barrier that students are facing when intending to utilize social media for learning purposes. Seo (2013) argued that students must have good equipment and high speed Internet access that has little to no interruptions in service. In one of Seo's case studies, Terri pointed out that free online programs often alter access privileges or shift to a fee-based model once the program has obtained its success. Terri stated, "The issue of access to free programs is a problem. You will use one and then it's taken down, or they start charging you to use it. You have to be flexible and knowledgeable about emerging technologies" (2013, p.27). Also, according to the instructors' responses at

King Abdul-Aziz University, the slow internet at the university is one major obstacle that they face when they used social media technologies in their classrooms (2013).

Instructors' attitudes. Another barrier is instructors' attitudes, and beliefs toward incorporating social media into their teaching environment to support students' learning. According to Greenhow et al. (2010), Tan and Libo (2009), and Warschauer (2007), although well-designed research studies support the incorporation of social media into the teaching environments, few educators have blended online social media into their instructional planning.

Seo (2013) argued that several factors are involved in teachers' resistance of the incorporation of social media into their instructional planning. One of these factors is age. However, a teacher's age is not always the obstacle that faces the effective implementation of social media into the classrooms.

According to one of the Seo's (2013) case studies, Derek's case, Derek noted that age is one factor that negatively affects the involvement of social media in the classrooms instruction, but not in the traditional sense: "Some of the younger teachers have less comfort with using online social media than some of our older, more seasoned teachers"(p. 30). Derek argued that many of the young teachers had little experiences with technologies in schools. Therefore, they don't have a model to help them know how to integrate online social media into their classrooms as an instructional tool. Other young teachers may not perceive social media as an academic strategy to support students' learning. Derek noted, "They can Twitter on their smart phone, but they can't see how this kind of communication would be used in the classroom" (p. 30). Derek suggested that more leadership at the administrative and broad level is necessary to help those

teachers realize and understand the effectiveness of social media in education. This shift also requires providing staff and educators training programs to teach them the best way to use such technologies to enhance students' learning.

Students' perceptions of social media technologies as educational tools can also be a major problem that affects the instructors' attitudes. According to Hilscher (2014), although there is a growing numbers of students who utilize Facebook as an ideal vehicle for a virtual learning community, it is not known how students perceive the use of social media in an educational settings. According to some of the instructors at King Abdul-Aziz University, one obstacle preventing the instructors from using social media tools in the teaching environments is that students are not taking the integration of such tools into the learning environments seriously. Thus, developing the students' awareness and knowledge of how to utilize social media technologies effectively for educational purposes is another major challenge.

Another factor is teachers' negative attitudes towards blending social media into their teaching environments. They do not see the benefits of using online social media in their classrooms (Lei, 2009). A dominant factor that teachers encounter is that many of them are fearful that the use of social media could blur the teacher/students roles (Seo, 2013). In one of Seo's case studies, Alicia stated that "there are some people who think that by utilizing these Web 2.0 tools, you may not be maintaining some level of propriety. Many teachers used to believe that use of online social media was pandering to the wasteful behavior of the students. Or worse, we were just trying to entertain them" (p. 24). Other teachers complained about the fact that students are connecting with them all

the time with links or information from the web that not only expand the knowledge of the class, but the teachers' too.

School administrators' negative attitude is another obstacle that faces integrating online social media into our classroom instruction. Seo (2013) stated that administrators often resist full support of online social media, fearing it will blur the traditional roles of the past. So, administrators consider the acceptance of using online social media as a teaching tool as a threat to existing teaching roles. Also, administrators struggle to justify the costs of proprietary programs and technologically rich classrooms. One of Seo's (2013) case studies, Derek's case, stated that, "Nervous administrators and reluctant school board have been our biggest limitation to real progress. The story of administrators toward social media has usually been negative. They see it as risky. So, without their backing, this kind of use is not going to happen" (p.30).

Also, the restricted amount of available and allowed online programs that a teacher can use and incorporate into the classroom is another obstacle that school creates. According to Derek, one of Seo's (2013) case studies, "our most robust online resources are being used for very trivial entertainment. But, most of these very powerful programs are forbidden in our schools" (p. 31). This exclusion of such tools and sites from the instructional setting reflects that social media lacks credibility even though social networks have brought about changes all over the world.

Posting inappropriate materials, Cyberbulling, and Privacy issues. According to Lenartz (2013), "some of the current problems identified as occurring from the use of social media in higher education include the posting of inappropriate or illegal materials, cyberbulling, cyberstalking, online threats, sharing of protected information, privacy,

critical remarks about staff, faculty, or students, and distractions in class" (p. 29). Seo (2013) argued that when students access the system, they are guided to an unidentified or poorly researched location only to find inappropriate materials and interaction that could either pose as a distraction or cause harm to the students.

There are many examples of harassment, hacking, or virtual sabotage that have taken place inside some of the social media tools or websites such as virtual worlds (e.g., Second Life) where students can behave in a manner that is both virtual and disguised by an avatar. According to Sipress (2007) online safety issues such as harassment and hacking have arguably affected real lives of students outside of the schools. Thus, educators need to be careful when choosing a location or one of the online tools to send their students, according to Schiller (2009).

Privacy is another concern that arises when using social media. Chakraborty et al. (2013) stated that "Social media are being fast adopted by older adults for extending their social relationships. However, along with the adoption, there have been concerns about risky issues regarding privacy leakages and information sharing hazards" (p. 948). According to boyd and Ellison (2007), privacy concerns include protection of information, identity theft, safety, and control over posted information. As cited in Lenartz (2013), "A study by Chretien, et al. (2009) found that 13% of medical schools reported disciplining a student for a violation of patient confidentiality on a social networking website" (p. 35).

boyd and Ellison also argued that the right of law enforcement is another concern related to privacy when using information available through social media technologies. Instructors are responsible to increase and develop students' awareness regarding the

right of law enforcement when using online information available on social media and social networking websites. Boyd (2012) stated that "Social Networking Sites, because they aggregate online functionality and domains of personal information, can be regarded as reasonable proxies for wider-ranging manifestations of online privacy risks" (p. 2). He argues that as these sites encourage users to share personal and professional information, there are growing concerns over how social networking sites collect and use personal information and how this information is shared by users. Lo (2013) stated that, "some participants also made comments on how privacy was an obstacle between learners and teacher" (p. 72).

However, Lenartz (2013) stated that, "Privacy for users of social media is an area certain to be the subject of debate and legal decisions in coming years" (p. 38). This topic is a major challenge in Saudi Arabia where people are conservative and the society is closed.

Cyberbulling is another challenge that occurs from using social media in higher education. Lenartz argues that cyberbulling and cyberstalking can be extended to include the issues of bullying and stalking which occur offline that can transfer the behavior to online forums including social networks. These issues include, as Leanartz claimed, unwanted contact, tracking of behaviors, and threatening behavior in online settings. Lane (2011) argued that consequences results from cyberbulling can be severe such as committing suicides. Lane identifies at least six suicides that have been committed as a result of cyberbulling using social media technologies.

Another challenge is the posting of inappropriate materials or criticisms. According to the researcher (2013), some of the instructors at King Abdul-Aziz

University reported that posting inappropriate materials or critical comments about the instructors on social media by the students is one factor that negatively affects the instructors' attitudes toward using social media as educational tools in their teaching environments. Lenartz (2013) concluded that the issue of critical remarks about faculty, staff, and students through the use of social media is complex. Lenartz argued that institutions are challenging to make a balance between individuals' right to free speech while protecting the rights of other individuals from online attacks.

Other instructors reported that one challenge preventing the instructors at King Abdul-Aziz University from adopting social media for teaching purposes is the students' negative attitudes toward inappropriate materials on social media which are considered as against their Islamic religion, including the instructors reported, music, pornographic and sexual materials. Lenartz (2013) mentioned an example of how the posting of inappropriate materials is the issue that appears most frequently in the media. This example involves the City of Phoenix's former chief spokesperson, David J. Ramirez. According to Wong (2009), Ramirez was fired for posting inappropriate materials on Facebook include profanity, a homophobic slur, jokes about religions, and sexual comments on the page of an intern. Thus, instructors and administrators should increase students' awareness regarding avoiding the post of inappropriate materials and how it negatively affects the progress of education and students' academic achievements.

The lack of instructional pedagogy. An additional barrier to utilize social media for learning purposes is the lack of instructional designs of educational programs and planning activities. Seo (2013) argued that the greatest challenge to the success of online social media in the classroom does not lie in the teachers' acceptance or rejection of

digital interaction. Instead, it lies in the absence of solid instructional designs. Here the lines between planning and instructional activity are blurring more than teachers' roles. Seo suggests that as many educational programs have failed to meet the diverse needs of modern classes, schools must focus on principles of integrated design that involve online social media effectively in the design of our classroom instruction. Without a solid educational plan and principles for instructional designs, educators and students may find themselves lost in an ever-blurring digital landscape.

Wnag et al. (2012) also argued a potential barrier to utilize social media technologies is the lack of educational content in social media compared with other forms of media. Additionally, Karasavvidis (2010) claimed that one of the most noted problems related to E-learning is the lack of pedagogy. Also, according to the responses of the instructors at King Abdul-Aziz University, they reported that one challenge that they face when intending to integrate social media into their teaching environments is the lack of instructional pedagogy that serves the implementation of new technologies into the learning environments. They reported that the university pedagogy depends mostly on traditional and standardized curriculum that needs to be covered by the end of the semester, so there is not enough time to incorporate online technologies into their teaching methods and ecologies.

Language. Language is another obstacle facing students when utilizing social media for learning. Alaugab (2007) found that the greatest barrier to online instruction for female faculty and students at Al-Imam Muhammad Bin Saud Islamic University is the lack of using the English language. As one of his study predictors was language, his study findings showed that the better the students' English language skills were, the more

willing they were to take courses online. Also, he claimed that the highest mean of barriers both Saudi female faculty and students faced was the lack of using English because most of the online technologies, the studies, and the research available on the Internet are in English. Thus, Saudi instructors and students who understand English are the prime beneficiaries of these technologies. So, as few female faculty and students in Saudi universities understand English, they need to take English courses in order to effectively use online technologies. Additionally, findings of his study revealed that female students who had better English language skills had a more positive attitude toward online instruction.

However, studies have concluded that there is a gender difference in learning foreign languages. Lai and Kuo (2007) found that 91% of the boys appeared to be in favor of learning language using Computer Assisted Language Learning (CALL), while 57.2% of the girls found it is difficult to learn a language using CALL. Other studies concluded that girls are found to be more inclined to study foreign and second languages and outperform boys (Sunderland, 2000). Also, Week (2011) found that males have a more negative view and less aptitude towards foreign languages than females.

Distractions and lack of intention. Distraction for students and instructors is a major challenge when incorporating social media technologies into the teaching and the learning environments. Lenartz (2013) stated that:

> Social media creating a distraction in class is a problem for faculty teaching courses and other students who are impacted. A Faculty Focus (2010) survey of 1400 faculty members found that faculty expressed a concern that social media is

a distraction in the classroom and also that it can lead to poor writing by students (p. 49).

Also, according to the instructors' responses at King Abdul-Aziz University, some of them reported that one factor that discourages the instructors to use social media in their teaching environments is the distractions that students were exposed to which prevents the learners from focusing on the course content (the researcher, 2013). Bugeja (2006) also argued that using Facebook in the classroom results in distraction and lack of students' attention. However, some of the instructors at King Abdul-Aziz University reported that one distraction that they faced when they used social media in their classrooms is that students do not take the integration of social media technologies into the learning environments seriously.

Costs and the lack of funding .Costs and the lack of funding is another obstacle to implement online social media into the classrooms instructions. According to one of Seo's (2013) case studies, Terri's case, Terri stated that the lack of funding interfered with the continued use of online social media in education. This is because some of these tools moved from a free to a fee-based format: one had to pay for member status to post or make comments via these online tools. Terri notes, "Without public support of school innovations, it will be difficult to model these kinds of authentic online interactions" (p. 30).

However, as social media have spread in the field of higher education, investigating and studying in-depth possible solutions to overcome challenges to utilize social media to support students' learning is crucial in order to help instructors to use such technologies effectively in their teaching environments. Lenartz (2013) stated,

"Clearly, many challenges resulting from the use of social media by institutions of higher education are very real and need to be considered by institutions" (p.39).

Chapter Summary

Chapter 2 provides a review of related literature to social media technologies and learning. The researcher accordingly connected the previous studies that have been conducted and related them to the current study. Also, the researcher organized all topics and subtopics in order to be compatible with the purpose of this study and the research instrument variables. Additionally, to provide a better understanding of the use of social media in education, the researcher described all details related to social media and learning, such as social media definition and examples, electronic learning, electronic learning web 2.0, digital natives, advantages of social media in learning, and the challenges to the use of social media in education. Chapter 3 describes the research procedures that were completed in order to design a reliable instrument for the current study, and the statistical procedures used to analyze the collected data.

Chapter 3

Methodology

Introduction

The purpose of the current study is to investigate Saudi students' attitudes toward using social media to support their learning at King Abdul-Aziz University in Jeddah. The chapter describes research procedures that were used to design a reliable instrument for this study, and the statistical procedures used to analyze the collected data. Informative descriptions of these procedures are explained in the following sections:

1. Research Design
2. Research Questions
3. Research Hypotheses
4. Research Setting
5. Data Collection Procedures
6. Description of the Variables
7. Research Sampling (Target Population, Participants, Human Subject Issues)
8. Instrumentations (Back Translation, Reliability, Validity)
9. Data Analysis
10. Limitation of the Study

Research Design

In this study, a mixed methods research design is used to investigate Saudi students' attitudes towards using social media to support their learning. A mixed method design research is an approach that combines both qualitative and quantitative methods of research. According to Creswell (2009), "It is an approach to inquiry that combines or

associates both qualitative and quantitative form of research. It involves philosophical assumptions, the use of qualitative and quantitative approaches, and the mixing of both approaches in a study" (p.4).

Creswell (2009) argued that there is more insight to be gained from the combination of both qualitative and quantitative research than either form by itself. Creswell (2009) concludes that four fundamental aspects are influencing the design for mixed methods research: timing, weighting, mixing, and theorizing (See Table 4).

Table 4

Aspects in Planning a Mixed Methods Design

Timing	Weighting	Mixing	Theorizing
No Sequence Concurrent	Equal	Integrating	Explicit
Sequential-Qualitative first	Qualitative	Connecting	Explicit
Sequential-Qualitative first	Quantitative	Embedding	Implicit

Source: Adapted from Creswell et al. (2009)

Creswell concluded that researchers need to consider the timing aspect of their mixed method collection whether it will be in phases (sequentially) or gathered at the same time (concurrently). Collecting the data concurrently means that a researcher collects both quantitative and qualitative data at the same time using a research instrument that asks for both quantitative and qualitative data. Therefore, the weight or priority in this type of research is given to both quantitative and qualitative research equally. On the other hand, when collecting the data sequentially, a researcher mixes both quantitative and qualitative questions through integrating the two datasets via transforming the qualitative themes into counts and comparing the counts with

descriptive quantitative data. Creswell (2009) argues that the research instrument is guided clearly by several theories.

For the current study, the first instruments are interviews for both instructors (face-to-face) and students (online questionnaire) at King Abdul-Aziz University from which the context of the questionnaire (electronic survey for the students) was created. The other instrument is an electronic survey for the students assessing their attitudes towards using social media to support their learning.

Research Questions

In order to investigate Saudi students' attitudes towards using social media to support learning at King Abdul-Aziz University, the following research questions were developed:

1. What are Saudi students' attitudes towards using social media to support their learning, particularly at King Abdul Aziz University?
2. What are examples of social media technologies that Saudi students use, and what are the purposes for which Saudi students use these tools?
3. What are barriers facing Saudi students at King Abdul Aziz University when utilizing social media to support their learning?
4. How well do the selected variables students' experience with six examples of social media (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype), perceived usefulness of social media, perceived ease of social media use, subjective norm, conservativeness level, and age predict Saudi students' attitudes toward using social media to support their learning?

5. Is there a relationship between students' attitudes and their intentions to use social media to support their learning?
6. Are there any differences between Saudi male and female students in:
    a. Their attitudes towards using social media to support their learning
    b. The barriers they have encountered when utilizing social media for learning?

Research Hypotheses

H1: Saudi students at King Abdul-Aziz University have positive attitudes towards using social media to support their learning.

H2: The selected variables students' experience with six example of social media (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype), perceived usefulness of social media, perceived ease of social media use, subjective norm, conservativeness level, and age will predict Saudi students' attitudes toward using social media to support their learning.

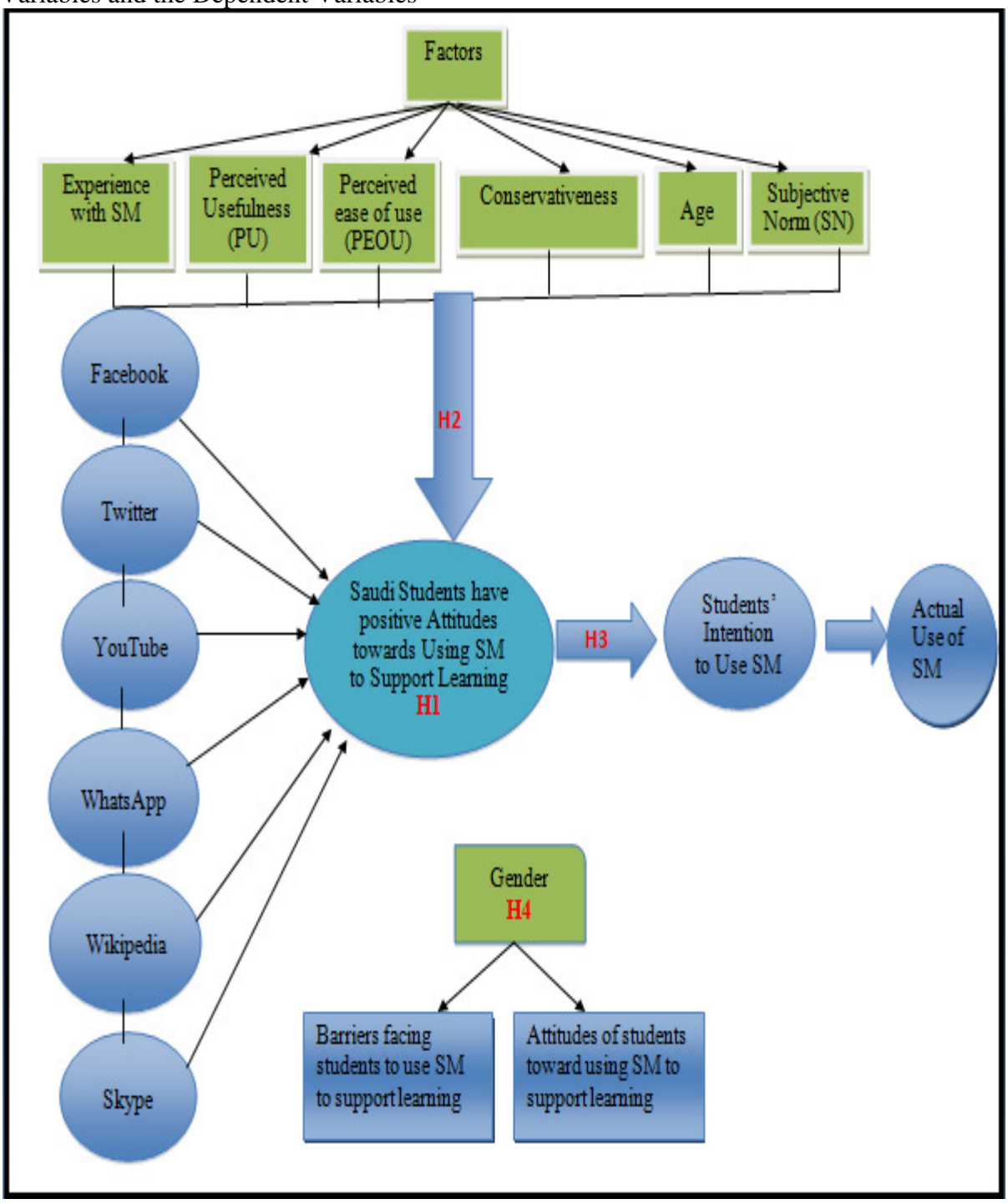
H3: Saudi students' attitudes are related to their behavioral intentions to use social media tools to support their learning.

H4: There is a significant difference between Saudi male and female students at King Abdul-Aziz University in terms of:

a. Their attitudes toward using social media to support their learning.
b. The barriers they have encountered when utilizing social media for learning purposes.

A model has been created by the researcher of the study's hypotheses, and the independent and the dependent variables can be seen in Figure 9**.**

Figure 9. The Study Model of Hypotheses, and the Relationship between the Independent Variables and the Dependent Variables



***Source*:** Created by the researcher (2013)

Study Setting

To conduct this study, King Abdul-Aziz University was selected as one of Saudi Arabian universities. King Abdul-Aziz University was established in 1976; it carries the name of the establisher of Saudi Arabia. King Abdul-Aziz University includes two separate campuses: according to the Islamic regulations there is one for males and another for females. Each of these campuses are provided with all cultural, recreational, and athletic facilities. It also has library equipped with the most up- to- date technology to serve students and the teaching staff. Within four decades, the university has become an outstanding institution of higher education on the local and international level.

This university offers educational programs that prepare undergraduate and the graduate students to prepare for careers in their changing communities. King Abdul-Aziz University is considered a pioneer in offering higher education to the Saudi females; the female and male sections were inaugurated in the same year. In addition, the university not only has the regular students' program, but it also has the external program to make it easy for all students to obtain higher education. It also established the Deanship of Distant Education to develop learning and teaching technology.

King Abdul-Aziz University involves 24 colleges, 15 of them in campus and 9 off campus. These colleges include:

1. College of Arts and Human Sciences	13. College of Environmental Design
2. College of Medicine	14. College of Medical Sciences
3. College of Pharmacy	15. College of Applied Medical Sciences
4. College of Home Economics	16. College of Arts and Design
5. College of Economic and Administration	17. College of Computer and Information Technology

6. College of Meteorology and Environment	18. College of Computer and Information
7. College of Dentistry	19. College of Education at King Abdul-Aziz University
8. College of Science	20. College of Business at Rabigh
9. Jeddah Community College	21. Girls College of Sciences
10. College of Engineering	22. College of Medicine at Rabigh
11. College of Engineering at Rabigh	23. College of Arts and Human Studies Girls Branch.
12. College of Earth Sciences	24. College of Marine Sciences

The university offers a variety of programs for both male and female students. However, students can get admission to the university according to some regulations of acceptance issued by the Ministry of Higher Education in Saudi Arabia.

After getting permission to conduct the current study at King Abdul-Aziz University (See Appendix E), this researcher sent an e-mail having both the study consent form (See Appendix B &D) and the link to the electronic survey to the department of Graduate School at King Abdul-Aziz that forwarded the researcher's email to the department of Information Technology, which has all of the students' e-mail addresses. The department of Information Technology then distributed the email having the consent letter and the link to the Arabic version of electronic survey to all students who use the university e-mail account service. The number of students who have an active university email account is 17,000 students, according to the department of Information Technology at King Abdul-Aziz University.

According to the statistics provided by the Ministry of Higher Education in Saudi Arabia in 2014 there were 48,788 faculty members and 1,058,155 students studying in

the government universities. Among these universities is King Abdul-Aziz University at Jeddah with 7,072 faculty members and 82,152 male and female students. More details are shown in Table 5.

Table 5
Number of Faculty at King Abdul Aziz University

Academic Rank	Number
Professor	412
Associate Professor	852
Assistance Professor	2,037
Lecturer	1,026
Teacher Assistant	2426
Teacher	275
Other	44
Total	7,072

Source: Created by the researcher (2014)

Data Collection Procedures

The data of this study was collected using an electronic survey created from three areas: the instructors' face-to-face interview responses, the online students' interview responses, and the literature review. After reading the consent letter, which describes the nature of the study and how the collected data will be used, participants were asked to click on the survey link to complete the survey. The participants in this study were informed that participation in the study was voluntary and that they had the right to withdraw their consent at any time. Additionally, the responses would remain anonymous, and the data collected would be used only for research purposes in an effort to make the participants more comfortable in responding to the survey items.

Human Subjects' Committee Approval. The researcher sent a request to the Human Subject Committee Lawrence (HSCL) at the University of Kansas to get their approval to start conducting the study and collecting the research data. After reviewing

the study applications, the HSCL issued the approval to start collecting the study data (See Appendices A, B, C & D).

Research field study approval. Two permissions were issued by both the Saudi Arabian Cultural Mission (SACM) at Washington D.C., and King Abdul-Aziz University at Jeddah, Saudi Arabia, to conduct the study and collect the data. A copy of the research survey, a letter of support from the academic advisor, and other related documents were sent to SACM in order to begin the process of the researcher's field trip. After getting the permission from SACM to conduct the field trip on August (2012) to collect the study data, the researcher sent copies of the academic advisor supported letter and the SACM permission to conduct the field trip to the Graduate Studies Department at King Abdul-Aziz University to get their permission to conduct the study at the university campuses and administer the interviews with the instructors (See Appendix E).

Back-translation technique. Back-translation is the process of translating a document or survey items that have already been translated into a foreign language (e.g., Arabic) back to the original language (e.g. English). It is recommended that it is done by an independent translator.

According to Chapman and Carter (1979) and Brislin (1970), back-translation is the most common and highly recommended procedure for translating especially in cross-cultural use of measurements. Back-translation technique includes translating from the target language (e.g., Arabic) back to the source language (e.g., English) so the equivalence between source and target versions can be evaluated. In addition, back-translation is appropriate, whether the research goals are comparative or operational, once the content of the items has been established.

Jones et al. (2010) argued that back-translation procedures should be applied to the test instruments as well as the items themselves. As a result, the back-translator should be knowledgeable about both the source and target languages. This means that he or she should be bilingual and familiar with the area under study in the source materials according to Bracken and Barona (1991). Chen and Boore (2010) also argued that it is important that the translators are fluent in both the original language and the target language and are knowledgeable about both cultures.

As the researcher's proposal was approved and Saudi students at King Abdul-Aziz University speak Arabic language, the researcher started the translation of the survey items from English to Arabic and then back to English. The researcher worked with a group of independent translators who are fluent in both languages; two were majoring in Educational Technology and translated the English version of the survey into the Arabic language. After that, the Arabic version was given to an independent translator who is fluent in both Arabic and English languages in order to translate the Arabic version to the English language. Finally, these two English versions were given to a graduate student at the University of Kansas is a native speaker of English to examine for any significant differences between the two versions of English (See Appendices F & G).

No significant differences were found between the two versions. The Arabic version was given to a well-known Arabic teacher to compile the final draft of the Arabic version from the previous Arabic versions. This Arabic version of the survey was given to four native Arabic speakers who were asked to read the items carefully and to examine the clarity of the survey items. Some of those Arabic native speakers gave suggestions to

improve the items of the survey, and the researcher changed the survey items accordingly.

The final draft of the Arabic survey was reviewed by a well-known English teacher specializing in teaching English as a second language in order to confirm the translation. He concluded that the survey items were clear and understandable (See Appendix H).

Description of the study Variables

This study has several variables that can be described as independent variables or dependent variables. These variables can be illustrated as the following:

Dependent Variables (DVs). The dependent variables of the study that were derived from the research questions are described as the following:

1. Attitudes (ATT) of Saudi students towards using social media to support their learning (DV1).
2. Saudi students' behavioral intentions towards using social media to support their learning (DV2).
3. Barriers facing Saudi students when they intend to use social media to support their learning (DV3).

Independent Variables (IVs). The independent variables of the study that were derived from the research questions are demographic variables and other variables described as the following:

A. Independent variables:
    1. Experience level with social media (IV1).
    2. Perceived Ease of Use (PEOU) of social media (IV2).

3. Perceived Usefulness (PU) of social media (IV3).
4. Subjective Norm (SN) (IV4).

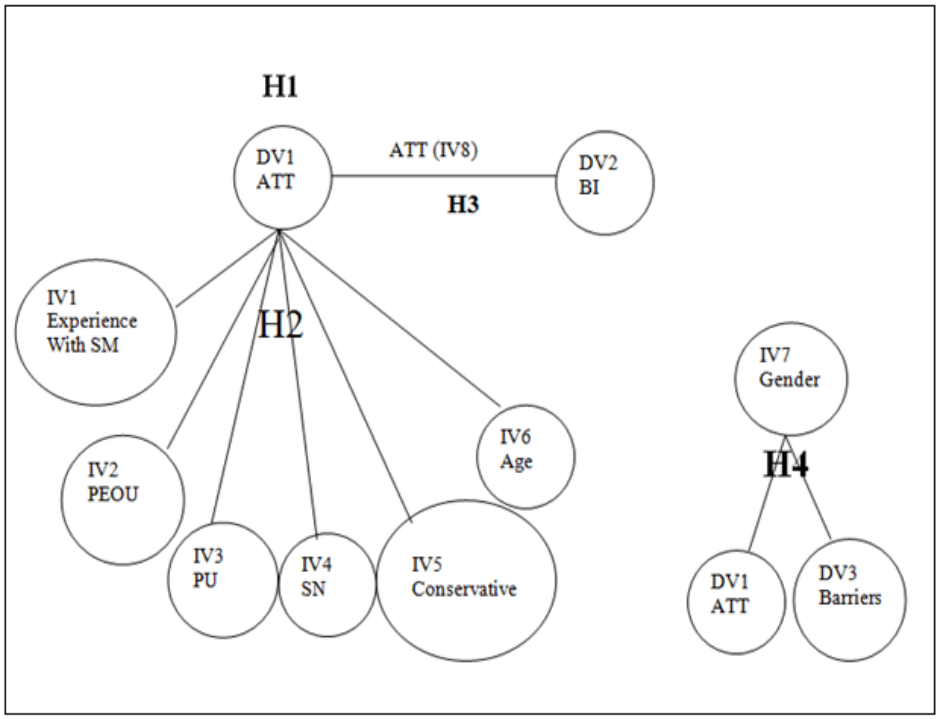
B. Demographic variables:

5. Students' conservativeness level (IV5).
6. Students' age (IV6).
7. Students' gender (IV7).

C. Other Independent Variables

8. Students' Attitudes (ATT) towards using social media to support learning (IV8) (See Figure 10).

Figure 10. Independent and Dependent Variables Model of the Study



Source: Created by this study researcher (2013)

Participants

Participants in this study are male and female Saudi students at King Abdul-Aziz University, Jeddah, Saudi Arabia. The number of the participants in this study is 526 students. Also, 200 male and female Saudi instructors participated in the face-to-face interview. Those instructors have different area of expertise, years of experience, ages, and academic degrees. Some of these instructors are teaching both in-class and online courses, while other instructors are only teaching in-class courses.

Instrumentation

The main instrument in this study is the students' electronic survey, which was created from three parts: the literature review, Saudi students' online interview responses, and Saudi instructors' face-to-face interview responses.

First, the students' online interview was distributed electronically using the Qualtrics.com website to measure their understanding and knowledge of social media and potential usage of these tools in their learning practices. The goal of this electronic interview was to get context from the students' responses in order to create the survey items. These questions sought to find out how these students are using social media technologies. How Saudi students perceive the learning values of social media tools and their educational benefits is another question on the survey.

Another question is investigating factors that encourage Saudi students to use social media whether in general or specifically in their learning environments. An additional question is investigating difficulties that Saudi students face when using social media to improve their learning. Moreover, another question is related to Saudi students'

perceptions of how social media technologies are altering their learning culture (See Appendix I).

Second, the instructors' face-to-face interview aims to explore whether or not Saudi instructors at King Abdul-Aziz University are using social media technologies in their teaching environments. Also, it investigates their perspectives about the educational values of social media and how they can use these tools to develop students' learning.

Additionally, these interviews aim to explore some effective social media technologies that Saudi instructors use to enhance students' learning. Another goal of this study is to investigate how Saudi instructors are incorporating these tools into their teaching environments in the ways that enable students to get benefits from such tools to improve their academic and social skills.

The interviews also explore how Saudi instructors help Saudi students utilize social media technologies effectively to support their learning; the interviews also explore opinions of how instructors can, in the digital era, develop their personal learning and knowledge of using social media tools in order to support students' learning and not depend completely on traditional teaching methods.

The questionnaire also considers the instructors' perspectives of barriers that face both Saudi instructors and students when using social media to improve learning. The final question investigates Saudi instructors' perspectives about the future of Saudi students' learning in the continuous emerging of social media; it considers instructors' concerns or foresights about students' learning and social or communication skills in light of the rapid influx of social media technologies into their daily life (See Appendix J).

The final and main instrument in the current study is the students' electronic survey, which was created from the instructors' and students' interview responses and the previous studies related to social media technologies and learning. This survey aims to examine attitudes and intentions of Saudi students toward utilizing social media technologies to support their learning.

Two types of questions were used in the survey of this study, which are closed-ended questions and open-ended questions. Likert scale responses were used in most items to rate on a five-point Likert-type scale the extent to which students agree or disagree with each item statement in the survey.

Some of the items of the survey were developed by the researcher according to the instructors' and the students' responses to the interviews at King Abdul-Aziz University; other items were adapted from other previous studies but modified to fit the study model. The questionnaire packet was expected to take approximately 20-30 minutes from the participants to be completed. The survey consists of 80 items split into eight separate parts.

The following are the survey sections:

I. Social Media Usage and Purposes

II. Examples of Social Media and Networking Sites

III. Experience with Social Media

IV. Attitudes toward Using Social Media to Support Learning

V. Factors to Use Social Media for Learning Purposes

VI. Barriers to Utilize Social Media in Learning

VII. Open-Ended Question

VIII. Demographic Information

Part I: Social media usage and purposes. This part consists of two questions involving six items. The first question, QA, was designed to collect information about participants' usage of social media and whether or not Saudi students are using social media. The second question, QB, was created to collect information about the purposes for which Saudi students use social media. These purposes include: social communication, news, learning, entertainment, or other purposes. This part of the survey was created from the students' interview responses.

Part II: Examples of social media and networking sites. The second part of the students' survey explores examples of social media and social networking sites that Saudi students use, and their frequency of use. It consists of seven items answered on a five-point Likert-type scale, which are: never use, rarely, sometimes, often, and frequently. Examples of social media and networking sites that have been used in this question were chosen according to the most popular social media that Saudi instructors and students reported in the interviews.

In addition, these examples of social media technologies were selected according to the most popular and used tools mentioned in previous studies. These tools include Social Networking Sites (e.g., Facebook), Blogs and Microblogging (e.g., Twitter), Media Sharing (e.g., YouTube), Text Chat (e.g., WhatsApp), Wikis (e.g., Wikipedia), Video Teleconferencing (e.g., Skype), and or other (See Appendix F, part II, QA).

Part III: Experience with social media. The third part of the survey asks the students to rate their experience levels with examples of social media such as Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype. It consists of six items answered

on a five-point Likert-type scale with 1=No Experience; 2= Poor; 3= Average; 4= Somewhat Good; 5= Very Good. This question was created according to the Saudi instructors' and students' responses to the interview questions (See Appendix F, Part III, QA).

Part IV: Attitudes toward using social media to support learning. The fourth part of the survey was created to investigate students' attitudes toward using SM to support learning. It consists of four questions A, B, C, and D including 18 items. The first question, QA, asks the students whether or not they have taken a class where social media technologies were used. This question was developed according to the Saudi instructors' and students' responses to the interview questions.

The second question of part IV, QB, was created to collect information about examples of social media that the instructors use in the classroom for learning purposes (e.g., Facebook, Twitter, YouTube, WhatsApp, Wikipedia, Skype, or other), and the frequency of SM use (Never Use, Rarely, Sometimes, Often, and Frequently). This question consists of seven items and was created from the instructors' and students' responses to the interview questionnaire.

The third question of part IV, QC, was created to collect information regarding Saudi students' attitudes towards using social media technologies to support their learning. This question consists of nine items answered on a five-point Likert-type scale {5=SA (Strongly Agree), 4=A (Agree), 3=N (Neutral), 2=D (Disagree), 1= SD (Strongly Disagree)}.

Items of this question were adapted from Masrom and Hussein's (2008) book on User Acceptance of Information Technology. The items were modified for the study.

Items of this part were also adapted from Davis' (1993) published article on user acceptance of information technology: system characteristics, users' perception, and behavioral impact.

Question D in Part IV also measures students' attitude toward social media in the last three years: 5=become significantly more positive, 4=become slightly more positive, 3=remained the same, 2=become slightly more negative, 1= become significantly more negative (See Appendix F, Part IV, Q D).

Part V: Factors to use social media for learning purposes. The fifth part of the survey was created to explore factors that affect students' attitudes towards using social media technologies to support their learning. This part consists of 4 questions A, B, C, and D, each answered on a five-point Likert-type scale, with 5=SA (Strongly Agree), 4=A (Agree), 3=N (Neutral), 2=D (Disagree), 1= SD (Strongly Disagree).

The first question, A, measures one of the TAM factors that reflects Saudi students' PEOU, or how easy it is to use social media technologies for learning purposes. It consists of six items. Items 1, 2, 5, and 6 were adapted from Davis (1989); 1 and 6 also adapted from Rogers' (1995) and were modified for the study. Items 3 and 4 were adapted from Masrom and Hussein (2008) and Shittu et al. (2011) and were also modified for the present study.

Question B in Part V was created to measure another factor, which is PU. It investigates how Saudi students' viewing the educational values and advantages of social media in their learning. It consists of twelve items. Item 12 was adapted from Davis (1989) and Masrom and Hussein (2008), and modified for the study. Items 1-11 were

developed according to the instructors' and students' responses to the interview questions and also from the literature review related to the advantages of social media in learning.

Question C in Part V measures a third factor which is SN. It measures the effects of social influence on students' adoption of social media technologies for learning purposes. It consists of four items. These items were adapted from Davis (1989) and Masrom and Hussein (2008) and were modified for the current study.

Question D in Part V measures students' BI to use social media to support learning. This question consists of three items. Items are adapted from Masrom and Hussein's (2008) book of User acceptance of information technology. These items were modified for the present study.

Part VI: Barriers to utilize social media in learning. This part of the survey was created to investigate the difficulties that Saudi students face when utilizing social media for learning purposes. It is created from the literature review and from the Saudi students' and instructors' interview responses.

This question consists of ten items with five-point Likert-type scales, 5=SA (Strongly Agree), 4=A (Agree), 3=N (Neutral), 2=D (Disagree), 1= SD (Strongly Disagree). Items 1, 2, 5, 6, 8, 9, and 10 were developed from the literature review related to the barriers to adopt social media technologies for education and learning. Items 1, 3, 4, 5, 6, 7, and 9 were created according to the Saudi instructors' interview responses. Items 4, 5, 6, 7, 8, 9, and 10 were created from the Saudi students' responses to the interview questions.

Part VII: Open-ended question. The seventh part of the survey consists of an open-ended question. This question asks students to express additional comments or ideas related to using SM as educational tools (See Appendix F, part VII).

Part VIII: Demographic information. The eighth part of the survey was designed to collect demographic information about Saudi students at King Abdul-Aziz University, Jeddah. It consists of seven items. The first item asks about the students' conservativeness level, 5 = much more conservative, 4 = more conservative, 3 = the same, 2 = more liberal, 1 = much more liberal. The second question in Part VIII asks the students about their gender. The third question asks about the age of the students. The fourth question is asking about the students' major, 1= science studies, 2= human studies. The fifth question asks about the academic degree the students are working toward to complete, 1= bachelor's, 2= master's, 3=PhD. The six question asks the students whether or not they have computer at home, 1= yes, 2= No. The last question asks the students about whether or not they have smart devices (e.g., iPhone, iPad, Samsung) with possible answers, 1= yes, 2= No. Summary of the items that measure the participants' demographic information can be seen in Table 6.

Table 6

Items Measuring Demographic Information of the Participants

Demographic Info	Question	Possible answers
Conservativeness	Compared to my parents, I am……	5 = much more conservative 4 = more conservative 3 = the same 2 = more liberal 1 = much more liberal
Gender	What is your gender?	1= Female 2= Male
Age	What is your age?	……..?

Major	What is your major?	1= Science 2= Human Studies
Academic Degree	What is the academic degree you are currently working toward?	1= Bachelor 2= Master's 3= PhD
Having a Computer at Home	Do you have a computer at home?	1= yes 2= No
Having Smart Devices	Do you have any of the smart devices (e.g., iPhone, iPad, Samsung)?	1= yes 2= No

Validity and Reliability

Reliability. The term reliability refers to if scores for items on an instrument are internally consistent, if they are stable over time, and if there is consistency in test administration and scoring, according to Creswell(2009, p. 233).

Cronbach's Alpha will be computed to acertain that the instruments are reliable and have internal consistency. This procedure is common in measuring the reliability of any instrument. Cronbach's Alpha will be calculated for six dimensions: attitudes, perceived ease of use, perceived usefulness, subjective norm, behavioral intention, and barriers to utilize social media for learning.

The researcher will calculate the Cronbach's Alpha for each dimension separately in order to measure the consistency of scores across items. Using SPSS, the Cronbach's Alpha coefficient for the attitudes dimension was .896; for the perceived ease of use .829; for the perceived usefulness .910; for the subjective norm .870; for the behavioral intention .916; and for the barriers .77. Based on the findings of the reliability analysis, revisions and adjustments will be made.

In addition, a five-point likert-type scale was used for most parts of the instrument, and it ranged from Strongly Agree=5 to Strongly Disagree= 1. The higher the score, the more positive attitude that the participants hold towards using social media to support their learning. Lower scores indicate less positive attitudes students hold toward using social media to support learning. However, the response options ranged from 1 to 5 to allow for adequate variability to produce reliable results. Descriptive statistics are usually used to analyze this type of data by calculating the means of the items M, the standard deviation SD, and the percentage of participants' responses in each response category.

Validity. The term validity refers to whether or not one can draw meaningful and useful inferences from scores on particular instruments, according to Creswell (2009, p. 235). Frey (2006) defines validity as the extent to which the instrument measures what it is intended to measure. Items of the survey of the current study were developed based on content validity.

According to Frey (2006), content validity is the extent to which a specific set of items reflects a content domain. DeVellis (2003) argues that measuring beliefs or attitudes can be examined for content validity by having items reviewed by experts for relevance to the domain of interest.

Thus, to gain content validity for the survey items contained in the instrument of this study, experts at the University of Kansas in Educational Technology, Design and Art, and Psychology and Research in Education Departments reviewed the instructors' and the students' interview questionnaires and the students' survey to insure that the items accurately measure Saudi students' attitudes toward utilizing social media to

support their learning. An expert in research and survey design reviewed the survey structure. This expert helped the researcher with feedback and some suggestions that help to improve the quality of the survey items. In addition, experts majoring in educational technology reviewed the survey items to insure that these items are relevant to the purpose of the current study.

The researcher accordingly made some adjustments to the survey items and parts; she changed, deleted, or kept items, in order to improve the quality of the survey items. DeVellis (2003) argues that the impact of dropping items of the survey can either increase or decrease alpha depending on just how poor the items are to be dropped and the total number of items remaining in the scale.

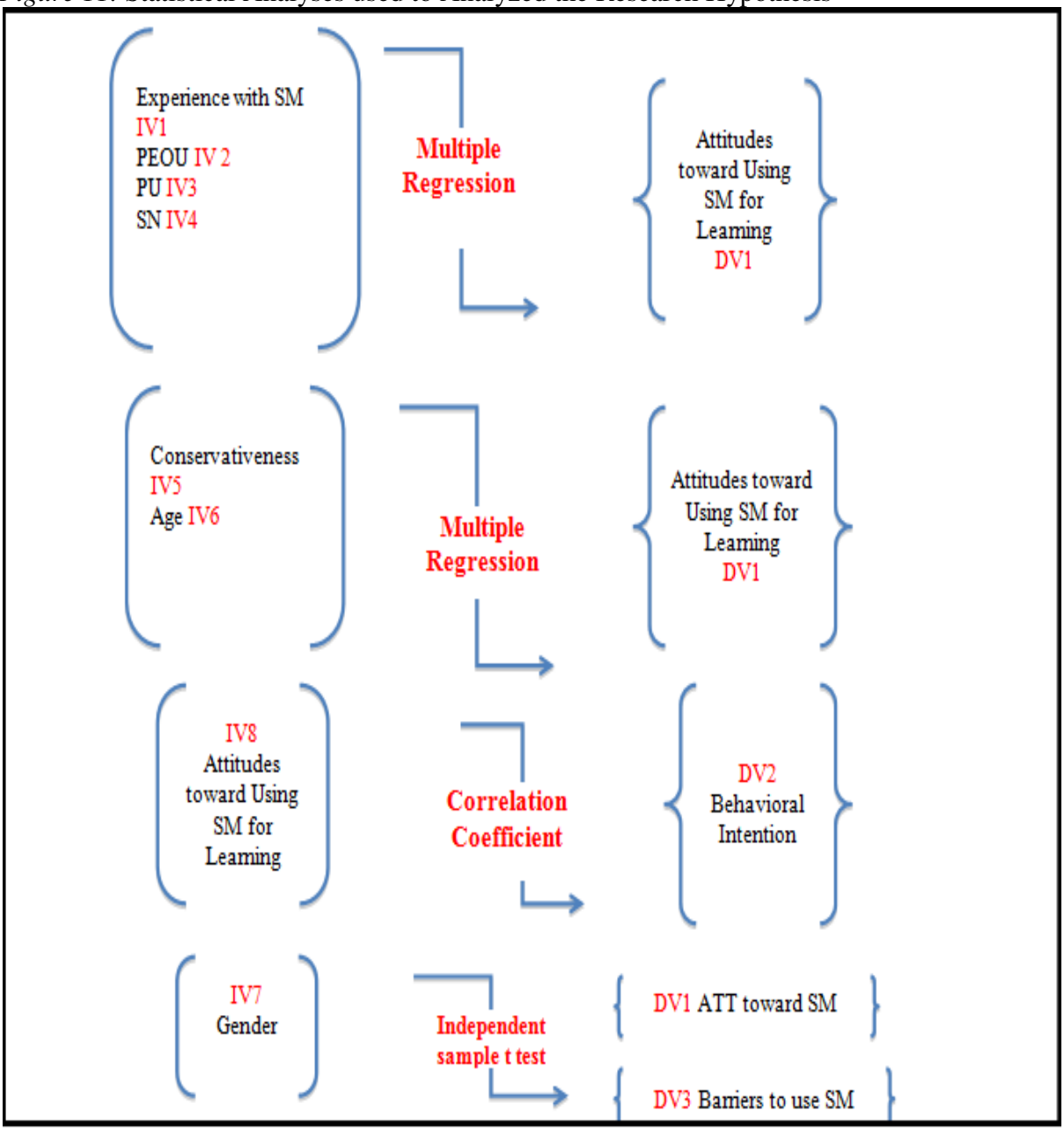
Saudi graduate students majoring in Educational Technology at the University of Kansas reviewed the survey items and gave their feedback and suggestions. The researcher revised some of the survey items according to their suggestions. Also, some items in the questionnaire were developed by other previous studies mentioned in the literature review, which will insure evidence validity. The researcher used books to follow item writing guidance for attitude scale to insure argument validity such as the chapter entitled "Guidelines for Developing Questionnaires" in *Human Performance Engineering* (Bailey, 1996, pp. 559-568).

Data Analysis

After collecting the data, the research questions will be examined and the hypotheses will be analyzed using different statistical tests and methods based on the type of data being analyzed (See Figure 11). To analyze the collected data, the Statistical Package for Social Science (SPSS) program will be used to analyze the data according to

the proposed questions and hypotheses of this study. All analysis of the study will be conducted using $p < .05$ as the level of statistical significance.

Figure 11. Statistical Analyses used to Analyzed the Research Hypothesis



Source: Created by the researcher (2013)

Based on the research questions and hypotheses, the researcher will conduct various types of data analysis tests and methods. The researcher explains how the research questions of the current study will be analyzed in the following section:

Questions 1-3: these questions were aiming to investigate the following: Saudi students' attitudes toward using social media technologies to support their learning, purposes of social media use, examples of social media that Saudi students use and interact with and their frequencies of use, and barriers facing Saudi students when using social media for learning. Descriptive statistical tests (mean) will be computed to analyze these questions. This type of analysis provides information about the mean, standard deviation, frequencies, variance, and the percentage of respondents per category.

Question 4: multiple regression tests will be conducted to examine how well the independent variables (conservativeness, age, perceived ease of use of social media, perceived usefulness of social media, subjective norm, and experience with social media) predict the overall attitudes of Saudi students at King Abdul-Aziz University toward using social media to support their learning. Green and Salkind (2007) stated that "With multiple regression analysis, each individual or case has scores or multiple independent variables (e.g., *X1, X2, X3* if there are three independent variables) and on a dependent variable (Y)" (p.285).

Question 5: A pearson correlation coefficient will be computed to examine if there is a relationship between students' attitudes and their behavioral intention to use social media to support learning. The pearson product-moment correlation coefficient (r) assesses the degree that

quantitative variables are linearly related in a sample, according to Green and Salkind (2007, p. 257).

Question 6: An independent-sample *t*-test will be conducted to examine the differences between Saudi male and female students at King Abdul-Aziz University in their attitudes toward using social media to support learning and the barriers that they face when utilizing social media for learning purposes. According to Green and Salkind (2007), the independent samples *t* test evaluates the difference between the means of two independent groups (p. 175).

However for the demographic information in this study, Part VIII, Questions *1* through *7*, descriptive statistical tests (mean) will be computed to analyze these variables. This type of analysis provides information about the mean, standard deviation, frequencies, variance, and percentage of respondents per category.

Chapter Summary

In Chapter3, the research methodology was explained in detail. It provides information regarding the design of the study that was aiming to investigate attitudes of Saudi students at King Abdul-Aziz University towards using social media to support their learning. This chapter also included several sections related to study methodology, such as research design, research questions, research hypotheses, study settings, procedures of data collection, description of the study variables, participants of the study, instrumentation, validity and reliability, and data analysis. However, Chapter 4 will provide the results of the statistical analysis that have been conducted for each one of the research questions.

Chapter 4

Results

Introduction

The purpose of this study was to investigate Saudi students' attitudes towards using social media to support their learning at King Abdul-Aziz University in Saudi Arabia, Jeddah. This chapter discusses the statistical analyses of the data collected in the study. The chapter involves description of population and sampling, descriptive statistics of the data, reliability analyses, results presented by the research questions, results of the open-ended survey question, and chapter summary.

Description of Population and Sampling

The participants of this study were both Saudi male and female students at King Abdul-Aziz University. The study was conducted at the beginning of November 2013 through January 2014. An email having the consent letter form and the electronic survey link was sent to the office of the Vice President of Graduate Studies at King Abdul-Aziz University, who sent it to the department of Information Technology that has the email addresses of all students. The department of Information Technology then sent the email with the consent letter and the questionnaire link to all of the students who actively use their university email account (a total of 17,000 students). A total of 709 questionnaires were returned, and 199 incomplete questionnaires were excluded (See Table 7).

The actual size of the sample was five hundred and ten participants (N=510) selected from all of the university campuses whether male or female. There were 214 male and 296 female Saudi students in the sample (See Table 8).

Table 7

Number and Percentage of Valid and Excluded Cases

Cases	N	Percent
Valid	510	71.9
Excluded[a]	199	28.1
Total	709	100

Table 8

Numbers of Participants Based Gender

Gender	Frequency	Percent
Male	214	41.96
Female	296	58.04
Total	510	100.0

Research Questions

The data of the current study was collected using an electronic survey developed to investigate the attitudes of Saudi students towards using social media to support learning at King Abdul-Aziz University. It is explores the factors that affect Saudi students' attitudes towards the adoption of online social media tools for learning purposes. Another aim of this study is investigating the barriers Saudi students face at King Abdul-Aziz University when intending to utilize social media for learning.

The Arabic version of the survey was distributed electronically using the Qualtrics.com website since the target population of the current study are Saudi students who are speaking the Arabic language. A total of 709 participants participated; 199 surveys were incomplete and 510 were completed.

All analyses conducted using $p<.05$ as a level of statistical significance. The research questions and hypotheses were analyzed using different statistical methods

according to the type of data being analyzed. The statistical package for Social Science (SPSS) software version 20 was used to analyze the data in this study.

Descriptive statistics were computed to analyze demographic data and give an overview of their distribution. This type of analyses provides information about the frequencies, variance, range, and percentage.

There were six research questions in this study as follows:

1. What are Saudi students' attitudes towards using social media to support their learning, particularly at King Abdul Aziz University?
2. What are examples of social media technologies that Saudi students use, and what are the purposes for which Saudi students use these tools?
3. What are barriers facing Saudi students at King Abdul Aziz University when utilizing social media to support their learning?
4. How well do the selected variables students' experience with six examples of social media (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype), perceived usefulness of social media, perceived ease of social media use, subjective norm, conservativeness level, and age predict Saudi students' attitudes toward using social media to support their learning?
5. Is there a relationship between students' attitudes and their intentions to use social media to support their learning?
6. Are there any differences between Saudi male and female students in:
    a. Their attitudes towards using social media to support their learning
    b. The barriers they have encountered when utilizing social media for learning?

Reliability Analysis

The survey instrument reliability in the current study was evaluated by calculating the internal consistency coefficient (Cronbach's Alpha). The researcher calculated Cronbach's Alpha for six dimensions in this study in order to measure the consistency of scores across items. The calculation of the Cronbach's Alpha coefficient for the attitudes dimension.896; for the perceived ease of use.829; for the perceived usefulness.910; for the subjective norm.87; for the behavioral intention.916; and for the barriers dimension .771. The Cronbach's Alpha coefficient values for each dimension were high, which indicates that there is adequate consistency among the survey items in each section (See Table 9 for calculated Cronbach's Alpha Coefficients for the six dimensions).

Table 9

Calculated Cronbach's Alpha Coefficients for the Six Dimensions

Scales	N of Items	Cronbach's Alpha
Attitudes Towards Using SM	9	0.896
Perceived Ease of Use	6	0.83
Perceived Usefulness	12	0.91
Subjective Norm	4	0.87
Behavioral Intention	3	0.92
Barriers to use SM	10	0.77

A five-point Likert-type scale was used for this instrument as follows: 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree. Participants' responses were coded on this scale for the six dimensions: attitudes, perceived ease of use, perceived usefulness, subjective norm, and behavioral intention. However, two items were reverse coded in the perceived ease of use dimension which are item 2 and item 5.

Also, a five-point Likert-type scale was used to code participants' responses on the third part of the survey, which is the experience with social media technologies. The response options for this part can be described as 1=No Experience, 2=Poor, 3=Average,

4=Somewhat Good, and 5=Very Good. Additionally, a five-point Likert-type scale was used to code participants' responses to one of the demographic information question (part 8), which is conservativeness level. The response options for this part can be described as 1=much more liberal, 2=more liberal, 3=the same, 4= more conservative, 5= much more conservative.

Demographic Description

The participants' demographic characteristics are described in detail in this section. This information includes participants' conservativeness level, age, gender, major, academic degree, access to a computer at home, and having any of the smart devices (e.g., iPhone, iPad, or Samsung).

Participants' Gender

The study participants were Saudi male and female students who are studying at King Abdul-Aziz University located in Jeddah, one of Saudi Arabia's big cities. As shown in Table 10, the number of participants who participated in the survey was 510 students; 214 were male (41.96%), while 296 were female students (58.04%).

Table 10

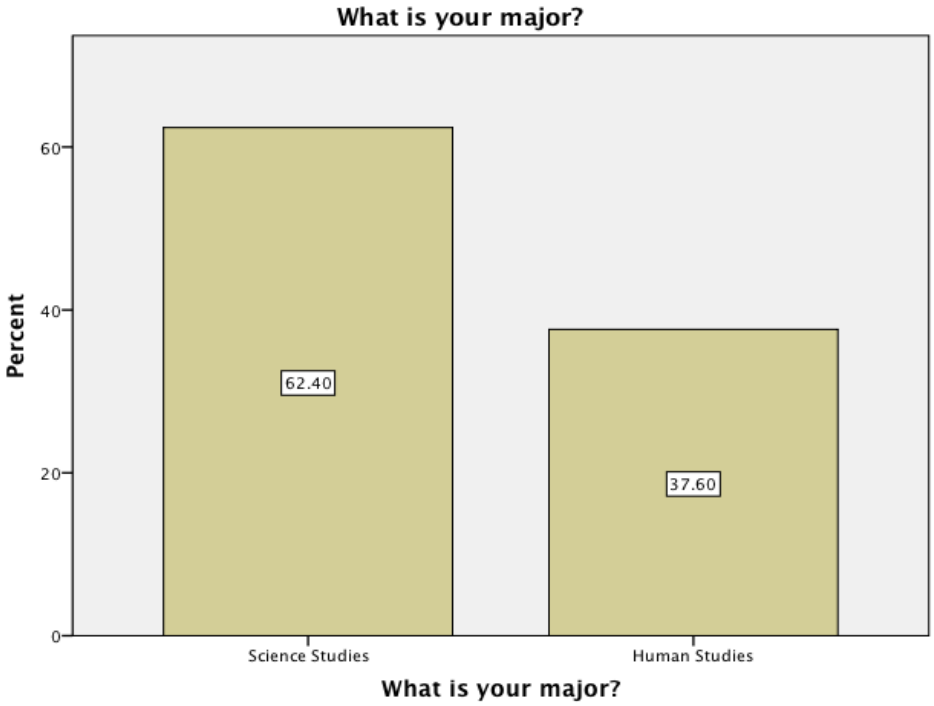
Frequencies of participants' Gender

Gender	Frequency	Percent
Male	214	41.96%
Female	296	58.04%
Total	510	100%

Participants' Major

Participants were asked to choose from two different majors: 1= Science Studies, 2=Human Studies. Results show that 62.3% of the participants are majoring in Science Studies, while 37.7% are majoring in Human Studies (See figure12)

Figure 12. Participants' Major



Access to a Computer at Home

Participants were asked whether they have a computer at home or not. The scale was 1= No, 2=Yes. Results show that the majority of the participants have a computer at home; 525 of the participants reported they have a computer at home (99.4%), while 3 participants reported they do not have a computer at home (0.6%).

Having any of the Smart Devices

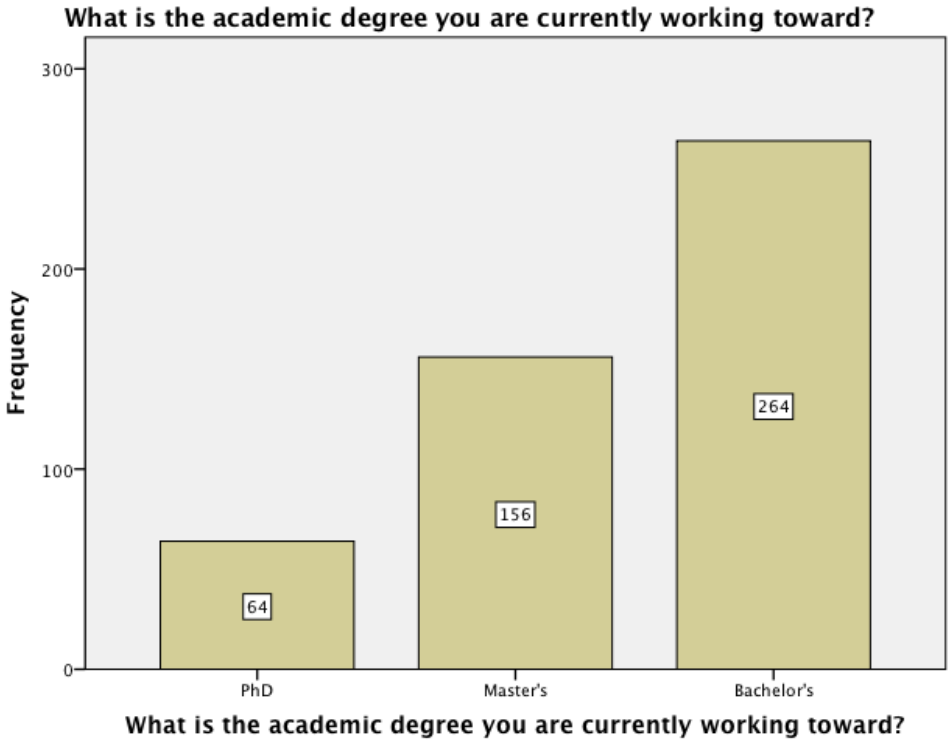
Participants were asked to report whether they have any of the smart devices such as iPhone, iPad, or Samsung. The scale was 1= No, 2=Yes. Results show that 514 participants reported they have smart devices (97.3%), while 14 participants reported they do not have smart devices (2.7%).

Participants' Academic Degree

Participants were asked about what is the academic degree they are working toward. There were three scales as follows: 1= Bachelor, 2= Master's, and 3= PhD.

Results show that 264 of the participants were Bachelor students (54.5%), 156 of the participants were Master students (32.2%), and 64 of the participants were PhD students (13.2%) (See figure 13).

Figure 13. Participants' Academic Degree



Usage of Social Media Technologies

Participants were asked to answer a question about whether or not they are using social media, and 523 participants reported they use social media (99.1%), while 5 participants reported they are not using social media tools (0.9%).

Findings of Research Questions

Research questions were analyzed by using different types of data analysis methods. The following explains in detail analyzing each question based on the variables being analyzed.

Research question one. What are Saudi students' attitudes towards using social media to support their learning, particularly at King Abdul-Aziz University?

The first question was designed to explore Saudi students' attitudes toward using social media to support their learning. Participants were asked to rate their degree of agreement by responding to nine items determining their attitudes. Participants' responses were measured using a five point Likert-type scale: 1=Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree. A high score indicates the more positive attitudes that the participants hold toward using social media to support learning, and a low score indicates the least positive attitudes that the participants hold towards using social media to support learning.

Descriptive statistics were conducted to analyze the data in this question by calculating the means of the items and standardized deviations to report the participants' responses. The overall attitude of Saudi students at King Abdul-Aziz University toward using social media to support their learning was positive with a mean M= 3.99 (SD= .76).

As shown in Table 11, the most frequently mentioned attitudes were items number 3, 4, 7, 2, 6, 1, 5, and 8 respectively. "In my opinion, using social media to support learning is a good idea" (M= 4.28, SD= .86), "I find learning online using social media enjoyable" (M=4.11, SD= 1.02), "Communicating with my classmates and instructors using social media is a good learning experience"(M= 4.08, SD= .96), "Social media are important because they support my learning" (M= 4.07, SD= .93), "I like to engage myself with my classmates in collaborative projects using social media" (M= 4.05, SD=.1.03)," I like to use social media for learning purposes" (M= 4.04, SD= 1.03), "Using social media for learning is very desirable for me"(M= 4.00, SD= 1.03), and "I

prefer attending a class where the instructor is using social media in his/her teaching" (M=3.84, SD= 1.12). However, the lowest frequently mentioned attitude was, "Once I started using social media to support my learning, I found it difficult to stop" (M= 3.51, SD= 1.23).

Table 11

Means and Standard Deviation of Saudi Students' Attitudes toward Using Social Media to Support their Learning

Statement	Mean	Std. Deviation
1. I like to use social media for learning purposes.	4.04	0.97
2. Social media are important because they support my learning.	4.07	0.94
3. In my opinion, using social media to support learning is a good idea.	4.28	0.86
4. I find learning online using social media enjoyable.	4.11	1.02
5. Using social media for learning is very desirable for me.	4.00	1.03
6. I like to engage myself with my classmates in collaborative projects using social media.	4.05	1.03
7. Communicating with my classmates and instructors using social media is a good learning experience.	4.08	0.96
8. I prefer attending a class where the instructor is using social media in his/her teaching.	3.84	1.12
9. Once I started using social media to support my learning, I found it difficult to stop.	3.51	1.23
Average	3.99	0.76

The scale was: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4=Agree, 5= Strongly Agree

Research question two. What are examples of social media technologies that Saudi students use, and what are the purposes for which Saudi students use these tools?

The second question explores examples of social media and social networking sites that Saudi students use and interact with and the frequencies of their use. These technologies including: Social networking sites (Facebook), microblogging (Twitter), Media Sharing (YouTube), Text Chat (WhatsApp), Wikis (Wikipedia), and Video

Teleconferencing (Skype). Participants were asked to rate their frequency of use of seven items representing social media tools. Participants' responses were measured using a five point Likert-type scale: 1=Never use, 2= Rarely, 3= Sometimes, 4= Often, 5= Frequently.

A high score indicates the more frequent usage of social media technologies by the participants, and a low score indicates the least frequent usage of social media technologies by Saudi students at King Abdul-Aziz University. Descriptive statistics were conducted to analyze the data in this question by calculating the means of the items and standardized deviations to report the participants' responses.

As shown in Table 12, the results indicate that the most frequently used tool of social media by the participants was WhatsApp (M= 4.60, SD= .88). The second most frequently used tools of social media by the participants were YouTube (M= 4.12, SD= 1.09), and Twitter (M= 3.57, SD= 1.42). Participants reported that sometimes they use Wikipedia (M=3.15, SD= 1.25), and Facebook (M=2.89, SD= 1.37).

However, the least frequently used tool of social media by the participants was Skype (M= 2.48, SD= 1.26). Participants also reported that they rarely use other social media technologies (M= 2.16, SD= 1.53). Some examples of these other social media technologies include 4.1% Instagram, 2.1% Telegram, .39% LinkedIn, .59% Keek, .59% Tango, 11% Google plus, .74% Line, .19% Wiggio, 2.9% BlackBerry Messenger, .98% path, .59% online games, .19% Pinterest, .19% Yahoo, and .98% Gmail sources (e.g., Gmail Chat).

Table 12

Descriptive Statistics for Examples of Social Media and Social Networking Sites

Social Media	Mean	Std. Deviation
Facebook	2.89	1.37

Twitter	3.57	1.42
YouTube	4.12	1.09
WhatsApp	4.60	0.88
Wikipedia	3.15	1.25
Skype	2.48	1.26
Other	2.16	1.53

Scales: 1=Never Use, 2= Rarely, 3=Sometimes, 4=Often, 5= Frequently.

Purpose of social media usage. Participants were asked to report the purpose of their usage and utilization of social media technologies. These purposes of using social media technologies include social communication, news, learning, entertainment, and/or other. Participants were asked to report the frequency of using social media for the purposes mentioned above as follows: 1= Never Use, 2= Rarely, 3= Sometimes, 4= Often, 5= Frequently.

As shown in Table 13, the results reveal that participants use social media most frequently for social communication (M=4.27, SD= .98). The second most frequently mentioned purpose of utilizing social media by participants was for learning (M= 3.83, SD= .97). The third most frequently mentioned purpose of using social media by participants was for entertainment (M= 3.76, SD= 1.18) and for news (M= 3.74, SD= 1.1). However, the least frequently mentioned purpose of using social media technologies was for other (M= 2.24, SD= 1.46). As the participants reported, the other category includes shopping, business, marketing, religious contents and programs, finding jobs, and commerce.

Table 13

Descriptive statistics for purposes of using social media technologies by Saudi students at King Abdul-Aziz University

Purpose	Mean	Std. Deviation
1. Social Communication	4.27	0.98
2. News	3.74	1.1
3. Learning	3.83	0.97
4. Entertainment	3.76	1.18
5. Other	2.24	1.46

Scales: 1=Never Use, 2= Rarely, 3=Sometimes, 4=Often, 5= Frequently.

Research question three. What are barriers facing Saudi students at King Abdul-Aziz University when utilizing social media to support their learning?

The third question of this study was designed to investigate the barriers that might affect attitudes of Saudi students at King Abdul-Aziz University toward adopting and using social media to support learning. Participants were asked to rate their degree of agreement with ten statements. Participants' responses were measured using a five point Likert-type scale: 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, and 5=Strongly Agree. However, items 1,2,3,6,7,8,9, and10, were reverse coded.

A high score indicates the factor is considered a barrier for Saudi students at King Abdul-Aziz University to use social media to support learning, and a low score indicates the factor is not a barrier for Saudi students at King Abdul-Aziz University to use social media tools to support learning.

Descriptive statistics were computed to analyze the data of this question by calculating the means of the items and standard deviations to report the participants' responses. The overall barriers that Saudi students at King Abdul-Aziz University faced in using social media technologies to support learning were positive and moderate

(M=2.62, SD=.55). As shown in Table 14, the most frequently mentioned barriers were items 4 and 5, “Some of the social media contents are against my religion.” with a mean of 4.12 (SD=1.11), and “I am concerned about privacy and security problems related to using social media.” with a mean of 3.72 (SD=1.19). For item 4, 251 participants strongly agree, 138 participants agree, 74 participants neutral, 24 disagree, and 23 strongly disagree. For item 5, 161 of Saudi students agree, 160 students strongly agree, 108 neutral, 46 disagree, and 35 strongly disagree.

The lowest frequently mentioned barriers were items 1,3,2,6, and 7. Item 1 is “I have access to the Internet at home” (M=1.36, SD= .71). Results show that 73.9% of Saudi students strongly agree that they have access to the Internet at their homes, with 377 students reporting they strongly agree they have access to the Internet at home, 100 of students agree, 9 students disagree, and 4 students strongly disagree. Item 2 was “I have sufficient experience to use technology.” (M=1.63, SD= .77); 261 participants strongly agree that they have sufficient experience to use technology while 4 participants strongly disagree. Item 3 was “My parents allow me to use social media.” (M=1.45, SD= .76); 340 participants strongly agree that their parents allow them to use social media, while 3 participants strongly disagree.

Table 14

Means and Standard Deviation of Barriers Facing Saudi Students When Utilizing Social Media for Learning

Statement	Mean	SD
1. I have access to the Internet at home	1.36	0.71
2. I have sufficient experience to use technology.	1.63	0.77
3. My parents allow me to use social media.	1.45	0.76
4. Some of the social media contents are against my religion.	4.12	1.11

5. I am concerned about privacy and security problems related to using social media.	3.72	1.19
6. I can understand the social media websites that are in English.	2.28	1.21
7. When my instructor uses social media in class, my classmates take the instruction seriously.	2.34	1.15
8. Most of my instructors use social media in their teaching.	3.09	1.24
9. The university provides students with training programs teaching.	3.33	1.31
10. Activities that require the use of social media in the learning environment are integrated in the university curricula.	2.86	1.33
Average	2.62	0.55

Scale: 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4= Agree, 5= Strongly Agree.

Research question four. How well do the selected variables students' experience with six examples of social media (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype), perceived usefulness of social media, perceived ease of social media use, subjective norm, conservativeness level, and age predict Saudi students' attitudes toward using social media to support their learning?

Participants' Level of Experience with Social Media Technologies

Participants were asked to rate their experiences with using the most common tools of social media technologies including: Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype. The scale was as follows: 1= No Experience, 2=Poor, 3=Average, 4=Somewhat Good, and 5=Very Good. As shown in Table 15, the results indicate that the most highly rated experience that the participants had was with WhatsApp (M=4.58, SD= .84). The second most highly rated experiences with social media tools that participants had were with YouTube (M= 3.97, SD= 1.104), Twitter (M= 3.63, SD= 1.38), and Facebook (M= 3.42, SD= 1.33). However, the lowest rated experiences with social media that the participants had were with Wikipedia (M= 3.29, SD= 1.34) and Skype (M= 2.92, SD= 1.46).

Table 15

Descriptive Statistics of Participants' Experience Level with Using Social Media Technologies

Social Media	Mean	Std. Deviation
Experience with Facebook	3.42	1.3
Experience with Twitter	3.63	1.4
Experience with WhatsApp	4.58	0.84
Experience with YouTube	3.97	1.1
Experience with Wikipedia	3.29	1.34
Experience with Skype	2.92	1.5
Average	3.64	1.25

Scale: 1= No Experience, 2= Poor, 3= Average, 4= Somewhat Good, 5= Very Good.

Perceived Usefulness of Social Media

Participants were asked to rate their degree of agreement with ten statements. Participants' responses were measured using a five point Likert-type scale: 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, and 5=Strongly Agree. A high score indicates the most perceived usefulness of social media to support learning, and a low score indicates the least perceived usefulness of social media to support learning. The average perceived usefulness of social media use by participants to support learning was high (M=4.1, SD=.69).

As shown in Table 16, the results reveal that the highest rated item was "I can learn anytime and anywhere using social media." (M=4.31, SD=.86). Other highly rated items include: "Learning through the Internet using social media reinforces the self-independent learning for me" (M=4.22, SD=.86), "I find many educational resources, links, programs, and topics of discussion when using social media." (M=4.15, SD=.93), "Watching videos on social media develops my listening skills." (M=4.12, SD=.924), "Overall, using social media for learning purposes improves my academic performance."

(M=4.12, SD=.91), and "Social media help me to learn collaboratively with those who have similar interests." (M=4.12, SD= .92).

Table 16

Means and Standard Deviation Values for Perceived Usefulness of Social Media Technologies in Learning as Reported by Saudi Students at King Abdul-Aziz University

Statement	Mean	Std. Deviation
1. I find many educational resources, links, programs, and topics of discussion when using social media.	4.15	0.93
2. Social media motivate me to learn better than traditional methods of teaching.	3.91	1.1
3. My writing skills develop as I communicate with others using social media.	3.91	1.1
4. Watching videos on social media develops my listening skills.	4.12	0.92
5. Social media provide me with applications and programs that help me to be more creative in my course projects and assignments.	4.09	0.93
6. Debating ideas and exchanging opinions with others through social media enhances my critical thinking skills.	4.08	0.88
7. Learning through the Internet using social media reinforces the self- independent learning for me.	4.22	0.86
8. I express my opinions and thoughts more freely with social media than in face-to-face discussions with my instructors and classmates in the classroom.	3.99	1.1
9. Social media help me to learn collaboratively with those who have similar interests.	4.12	0.92
10. I can learn anytime and anywhere using social media	4.31	0.86
11. Communicating and interacting with my classmates and instructors through social media helps me to improve my social skills.	4.00	1.02
12. Overall, using social media for learning purposes improves my academic performance.	4.14	0.91
Average	4.1	0.69

Scale: 1= Strongly Disagree, 2=Disagree, 3=Neutral, 4= Agree, 5= Strongly.

Perceived Ease of Social Media Use

Participants were asked to rate their degree of agreement with six statements. Participants' responses were measured using a five point Likert-type scale: 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, and 5=Strongly Agree. A high score

indicates the most perceived ease of use of social media for learning that participants had, and a low score indicates the least perceived ease of use of social media for learning by participants. The average perceived ease of use of social media for learning reported by participants was high (M=3.8, SD=.62).

As shown in Table 17, the results reveal that the highest rated items were "I find it is easy to navigate through social media windows." (M=4.19, SD=.86), "I find social media easy to use to support my learning." (M=4.15, SD=.91), and "I find it is easy to post my profile and class projects on the Internet using social media." (M=4.14, SD.94). However, the lowest rated item was "Interacting and using social media to support learning requires a lot of mental effort." with a mean of 2.99 (SD=1.2).

Table 17

Means and Standard Deviation Values for Perceived Ease of Use of Social Media Technologies for Learning as Reported by Saudi Students at King Abdul-Aziz University

Statement	Mean	Std. Deviation
1. I find social media easy to use to support my learning.	4.15	0.91
2. I find it takes a lot of effort to become skillful at using social media for learning purposes.	2.78	1.3
3. I find it is easy to navigate through social media windows.	4.19	0.86
4. I find it is easy to post my profile and class projects on the Internet using social media.	4.14	0.94
5. Interacting and using social media to support learning requires a lot of mental effort.	2.99	1.2
6. My interaction with social media tools and using them for learning purposes is clear and understandable.	3.96	0.92
Average	3.7	0.62

Scale: 1= Strongly Disagree, 2=Disagree, 3=Neutral, 4= Agree, 5= Strongly.

Subjective Norm

Participants were asked to rate their degree of agreement with four statements. Participants' responses were measured using a five point Likert-type scale: 1= Strongly

Disagree, 2= Disagree, 3=Neutral, 4=Agree, and 5=Strongly Agree. A high score indicates the most subjective norm participants ha, and a low score indicate the least subjective norm that participants had. The average subjective norm reported by participants was high (M=3.6, SD=.80).

As shown in Table 18, the results reveal that the highest rated items were "Most of my friends and classmates believe that using social media for learning purposes is a wise decision." (M=3.77, SD=.94), and "Most of my friends and classmates recommend using social media to support learning." (M=3.68, SD=1.02). However, the lowest rated item was "Most people who are important to me expect me to use social medial for learning purposes." (M=3.34, SD=1.1).

Table 18

Means and Standard Deviation Values for Subjective Norm Reported by Saudi Students at King Abdul-Aziz University

Statement	Mean	Std. Deviation
1. Most people who are important to me expect me to use social medial for learning purposes.	3.34	1.1
2. Most of my friends and classmates believe that using social media for learning purposes is a wise decision.	3.77	0.94
3. Most of my friends and classmates recommend using social media to support learning.	3.68	1.02
4. My instructors think that it is important to use social media to support learning.	3.58	1.1
Average	3.6	0.80

Scale: 1= Strongly Disagree, 2=Disagree, 3=Neutral, 4= Agree, 5= Strongly.

Participants' Conservativeness Level

Conservativeness is one of the determinants that predict students' attitudes toward using social media to support learning. Participants were asked to rate their conservativeness level compared to their parents, "Compared to my parents I am _____." The scale was as follows: 1= much more liberal, 2= more liberal, 3= the same, 4=more

conservative, 5= much more conservative. The average conservativeness level of participants was M=2.36, with SD= .96. As shown in Table 19, the results reveal that compared to their parents, the majority of Saudi students at King Abdul-Aziz University are more liberal than their parents; 42.8% of the participants are more liberal, 28.6% of the participants are at the same conservative level, 17.6% are much more liberal than their parents, 8.1% of the participants are more conservative, and 2.8% of the participants are much more conservative than their parents (See figure 14).

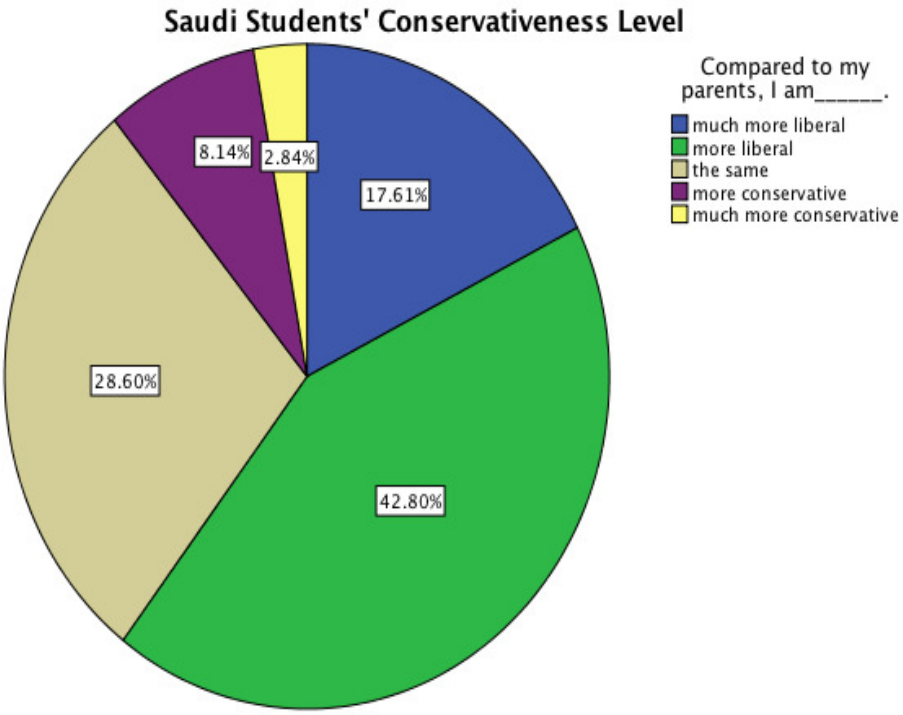
Table 19

Descriptive Statistics for Saudi Students' Conservativeness Level at King Abdul-Aziz University

Conservativeness Level	Frequency	Percent
1. Much more Liberal	93	17.6
2. More Liberal	226	42.8
3. The same	151	28.6
4. More Conservative	43	8.1
5. Much more Conservative	15	2.8
Total	528	100.0

Scale: 1= much more liberal, 2= more liberal, 3= the same, 4=more conservative, 5= much more conservative.

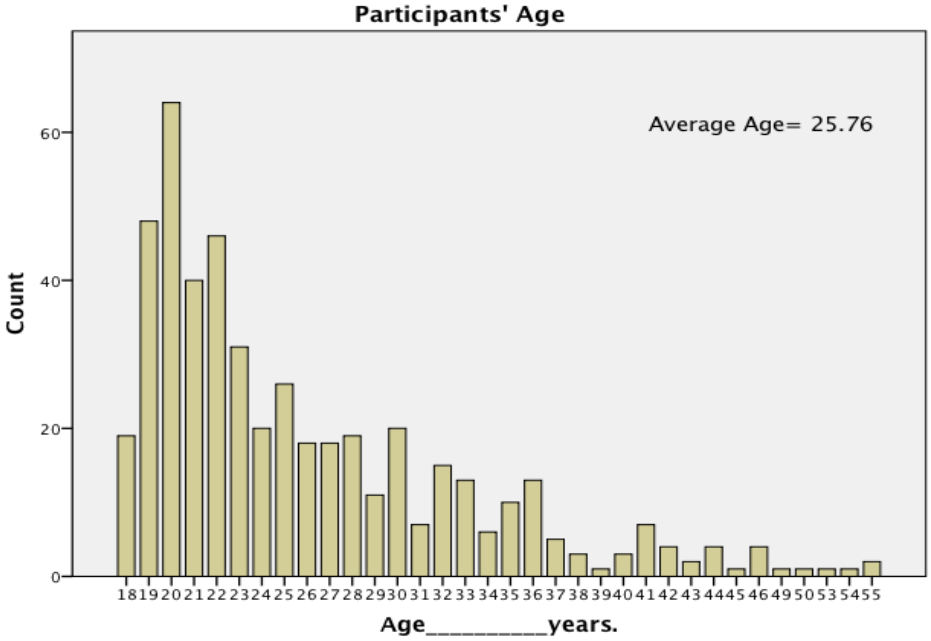
Figure 14. Participants' Conservativeness Level



Participants' Age

Age was also one of the determinants that predict attitudes of the students toward using social media to support learning. Participants were asked to give their ages by entering the number in an entry text box. Results show that participants' age ranged from 18 to 55 years old. Results also reveal that the average age of the participants was 25.92 (SD=7.34) (See figure 15).

Figure 15. Participants' Age



Research question four. How well do the selected variables students' experience with six example of social media (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype), perceived usefulness of social media, perceived ease of social media use, subjective norm, conservativeness level, and age predict Saudi students' attitudes toward using social media to support their learning?

A multiple regression analysis was conducted to evaluate how well the eleven variables: students' experience with six examples of social media technologies (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype), Perceived Usefulness of social media (PU), Perceived Ease of Use of social media (PEOU), Subjective Norm (SN), Conservativeness level, and Age could predict the overall Attitudes (ATT_Average) of Saudi students at King Abdul-Aziz University toward using social media to support learning. The multicollinearity was checked to test if two or more predictor variables in a multiple regression model were highly correlated. The results

show no problems with multicollinearity. Descriptive statistics for all of the independent variables and the dependent variable (average attitudes of the students (ATT_Average)) can be shown in Table 20.

Table 20

Descriptive Statistics for All of the Independent Variables and the Dependent Variable (ATT)

Variables	Mean	Std. Deviation
ATT_Average	3.99	0.77
Experience with Facebook	3.42	1.33
Experience with Twitter	3.63	1.38
Experience with WhatsApp	4.58	0.84
Experience with YouTube	3.97	1.1
Experience with Wikipedia	3.29	1.34
Experience with Skype	2.92	1.46
PEOU_Average	3.79	0.62
PU_Average	4.08	0.69
SN_Average	3.58	0.8
Conservativeness	2.35	0.97
Age	25.92	7.34

Note: Dependent Variable: Average Attitude (ATT_Average) of Students

As shown in Table 21, the linear combination of the eleven variables was significantly predictive of the overall attitudes of Saudi students at King Abdul-Aziz University toward using social media to support their learning, with $F(13,454)= 51.42$, $p< .05$.

The sample multiple correlation coefficient was R=.77 , and the adjusted R^2 for the overall multiple regression analysis was .58, indicating that approximately 58% of the variance in attitudes of Saudi students at King Abdul-Aziz University toward using social media to support learning can be accounted for by the linear combination of the eleven

variables entered in the model, which are: experience with six tools of social media (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype), PU, PEOU, SN, conservativeness, and age.

Table 21

Analysis of Variance and Regression Results of Saudi Students' Attitudes toward Using Social Media Technologies to Support Learning and the Eleven Variables

Source of Variation	Df	MS	F	Sig.	R	R^2	Adjusted R^2	Std. Error of the Estimate
Regression	13	12.65	51.42	0.00	0.77	0.596	0.58	0.495
Residual	454	0.25						
Total	467							

Note: Dependent Variable is Saudi students' attitudes toward using social media to support their learning.

As shown in Table 22, five predictors were significant predictors in the model. These predictors include PEOU with a standardized beta coefficient of .11, (p=.002), PU with a standardized beta coefficient of .63, (p=.000), and SN with a standardized beta coefficient of .12, (p= .001). However, age and experience with Skype were nearly significant with a standardized beta coefficient of .06, (p= .053) for age and standardized beta coefficient of .07, (p= .057) for experience with Skype.

Table 22

Regression Coefficients: Relationship between Saudi students' Attitudes toward Using Social Media to Support Learning and the Eleven Variables

Predictors	Unstandardized Coefficients		Standardized Coefficients	T	Sig
	B	Std. Error	Beta (β)		
(Constant)	-0.27	0.25		-1.1	0.28
Experience with Facebook	0.03	0.02	0 .06	1.48	0.14
Experience with Twitter	-0.01	0.02	-0.02	-0.59	0.56
Experience with	-0.03	0.03	-0.05	-1.3	0.20

YouTube					
Experience with WhatsApp	0.01	0.03	0.02	0.45	0.66
Experience with Wikipedia	0.01	0.02	0.02	0.63	0.53
Experience with Skype	0.04	0.02	0.07	1.9	0.06
PEOU_Average	0 .14	0.05	0.11	3.1	0.002
PU_Average	0.69	0.04	0.63	15.8	0.00
SN_Average	0.11	0.03	0.12	3.34	0.001
Age	0.01	0.003	0.06	1.94	0.05
Conservativeness	0.02	0.02	0.02	0.60	0.55

Note: Dependent Variable is Attitude toward using social media to support learning .

The results indicate that perceived usefulness of social media for learning (β=.63, p=.00) was the strongest predictor (determinant) of the average attitudes of Saudi students toward using social media to support learning among all the other predictors in the model. Perceived usefulness contributes six times as much as any other predictors in the model to attitude of the participants.

A multiple regression analysis (parsimony) was conducted with the significant predictors that have been shown to determine the attitude of students in Table 22, which are perceived ease of use (β=.11, p=.002), perceived usefulness (β=.63, p=.000), subjective norm (β=.12, p= .001), experience with Skype (β=.07, p=.057), and age (β=.06, p=.053). As shown in Table 23, the results of the parsimony reveal that all five predictors were significant determinants of the participants' attitudes toward using social media to support learning; perceived ease of use (β=.11, p=.002), perceived usefulness (β=.62, p=.00), subjective norm (β=.13, p= .00), experience with Skype (β=.07, p=.02), and age (β=.07, p=.02). Table 23 also shows that perceived usefulness (β=.62, p=.00) was the strongest predictor of attitudes of Saudi students at King Abdul-Aziz University to

use social media to support their learning even after taking out all of the unpredictable variables (See figure 16).

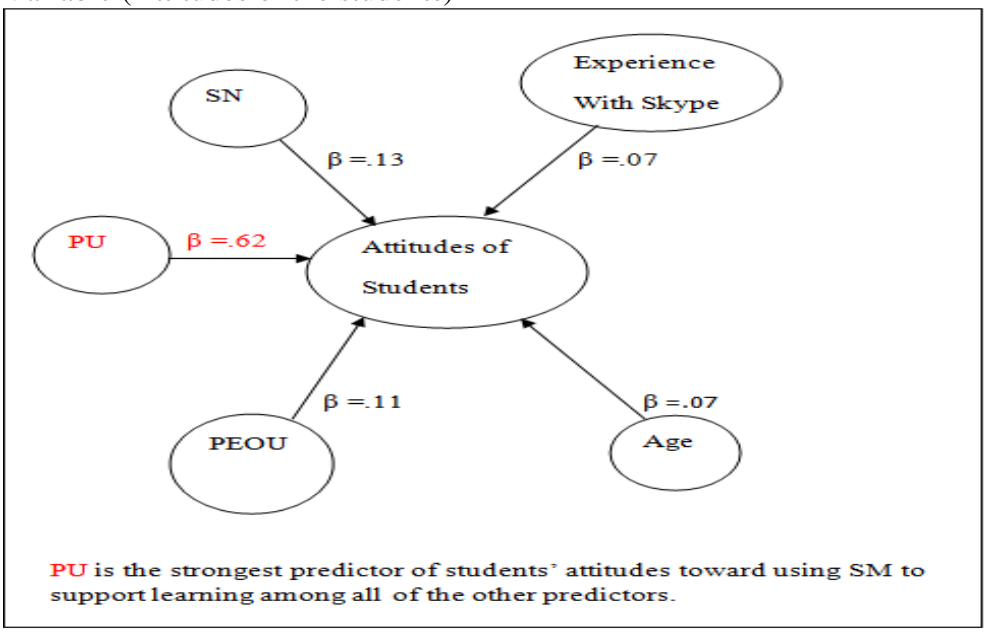
Table 23

Regression Coefficients: Relationship between Saudi students' Attitudes toward Using Social Media to Support learning and the Five Variables

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std Error	Beta (β)	t	Sig.
(Constant)	-0.09	0.19		-0.51	0.61
Experience with Skype	0.04	0.02	0.07	2.41	0.02
PEOU_Average	0.14	0.05	0.11	3.17	0.00
PU_Average	0.69	0.04	0.62	15.94	0.00
SN_Average	0.12	0.03	0.13	3.75	0.00
Age	0.01	0.00	0.07	2.39	0.02

Note: Dependent Variable is Average of attitudes of students.

Figure 16. Standardized Coefficients Beta (β) for Five Predictors of the Dependent Variable (Attitudes of the students)



Source: Created by the researcher (2014)

Research question five. Is there a relationship between Saudi students' attitudes and their intentions to use social media for learning purposes?

The fifth question in this study examines if there is a relationship between attitudes of Saudi students at King Abdul-Aziz University toward using social media to support their learning and their behavioral intentions to use such tools.

To test the relationship between the overall attitudes of Saudi students at King Abdul-Aziz University and their behavioral intentions to use social media technologies, a Pearson Correlation Coefficient Analysis was conducted.

As shown in Table 24, the correlation between the overall attitudes (M=3.99, SD= .76) of Saudi students at King Abdul-Aziz University and their behavioral intentions (M=4.2, SD= .818) is significant, r(508)= .668, p=.00. Thus, there is a significant relationship between the overall attitudes of the students and their behavioral intentions toward using social media to support their learning at p<.05(See figure 17).

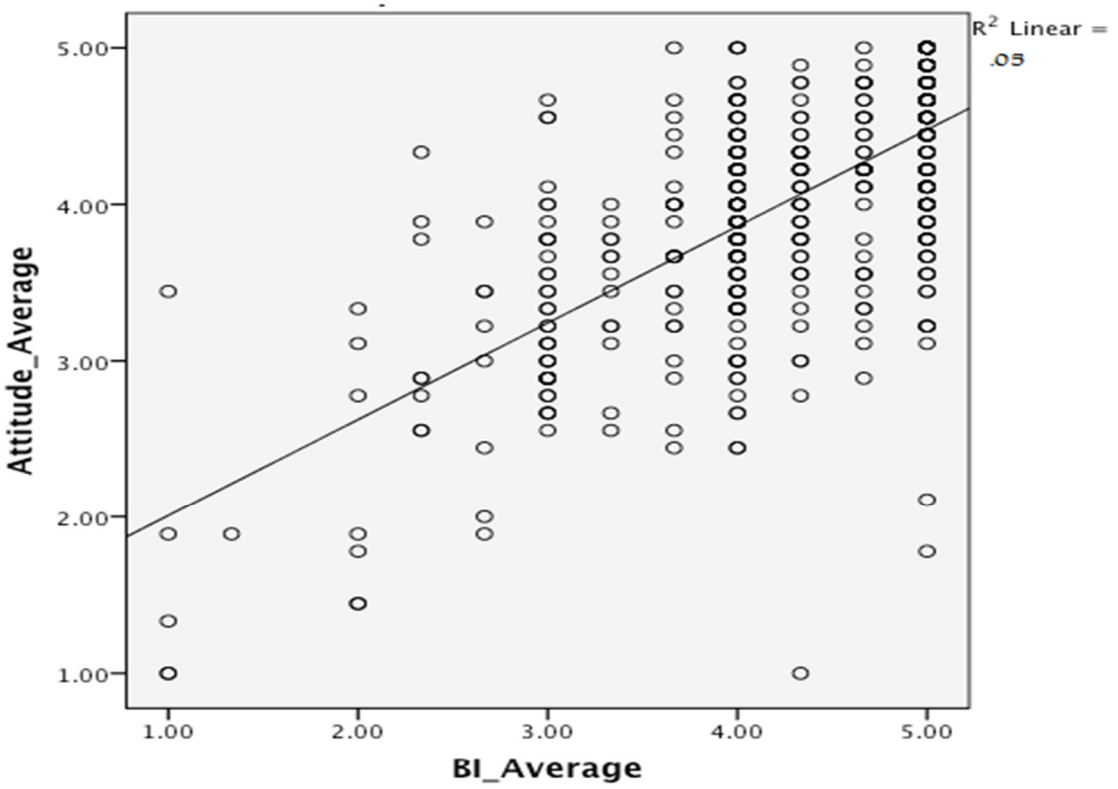
Table 24

Pearson Correlation Coefficient of the Overall Attitudes of Saudi Students at King Abdul-Aziz University and their Behavioral Intentions

		Students' Attitude	Behavioral Intention
Students' Attitude	Pearson Correlation	1	0.668**
	Sig. (2-tailed)		0.000
	N	510	510
Behavioral Intention	Pearson Correlation	0.668**	1
	Sig. (2-tailed)	0.000	
	N	510	510

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

Figure 17. Scatterplot of Attitudes of Saudi students at King Abdul-Aziz University and Their Behavioral Intentions



Research question six. Are there any differences between Saudi male and female students in:

a. Their attitudes towards using social media to support their learning.

b. The barriers they have encountered when utilizing social media for learning?

A series of independent samples t-test were conducted to examine the gender differences regarding the two survey subscales. As shown in Table 25, the difference in male and female Saudi students' attitudes toward using social media technologies to support their learning was not statistically significant, with t (508) = -.12, p> .05. The mean of the attitudes for male students was M=4.00 with a SD=0.82, while the mean of attitudes for female students was M= 3.99 with a SD=0.71.

However, the results show that gender differences were found in the barriers that Saudi male and female students have encountered when they intend to use social media to support their learning. As shown in Table 25, the difference in the barriers that male and female students have encountered was statistically significant, with t (508) = -2.96, $p<.05$. The mean of the overall barriers that male students have encountered was 2.69 with a SD=.51, while the mean of the overall barriers that female students have encountered was 2.57 with a SD=.47. This means that male students at King Abdul-Aziz University have encountered more barriers than female students in their usage of social media for learning purposes.

Table 25

Differences in Saudi Students' Gender in Terms of their Attitudes toward Using Social Media to Support Learning

Subscale	N	Mean	SD	t	df	Sig.
Saudi Students Attitudes toward SM				-0.12	508	0.902
Male	214	4.00	0.82			
Female	296	3.99	0.71			
Barriers to use SM for learning				-2.96	508	0.003
Male	214	2.69	0.51			
Female	296	2.57	0.47			

Note: Dependent Variables is Students' Attitudes Barrier when using social media to support learning

As shown in Table 26, male (M=2.69, SD=.51) reported more barriers than female (M=2.57, SD=.47). Female students (M=2.89, SD=1.18) were more likely to report that their instructors use social media in their teaching than male students (M=3.37, SD=1.26, p= .00). Female students (M= 2.26, SD= 1.00, & P= .05) report that when the instructor used social media into the learning environment, the students took the instruction seriously more than male students (M= 2.45, SD = 1.12, and p=.05). Another

difference was that female students (M=2.63, SD=1.26, & p= .00) report that activities requiring the use of social media are integrated in the curricula more than male students (M=3.19, SD=1.36, & p= .00). However, Males (M=2.14, SD=1.19) reported that they understand the social media that are in English better than Female students (M=2.39, SD=1.21, & p= .02)

Table 26

Gender Differences in Term of the Barriers Facing the Students when Using Social Media for Learning

Statement	Gender	N	Mean	SD	T	Df	Sig.
1. I have access to the Internet at home.	Female	296	1.38	0.74	-0.72	508	0 .47
	Male	214	1.33	0.68			
2. I have sufficient experience to use technology.	Female	296	1.67	0.76	-1.48	508	0.14
	Male	214	1.57	0.79			
3. My parents allow me to use social media.	Female	296	1.43	0.66	0.72	508	0.47
	Male	214	1.48	0.87			
4. Some of the social media contents are against my religion.	Female	296	4.10	1.09	-0.31	508	0.76
	Male	214	4.14	1.13			
5. I am concerned about privacy and security problems related to using social media.	Female	296	3.63	1.19	-1.87	508	0.06
	Male	214	3.83	1.19			
6. I can understand the social media websites that are in English.	Female	296	2.39	1.21	-2.39	508	0.02
	Male	214	2.14	1.19			
7. When my instructor uses social media in class, my classmates take the instruction seriously.	Female	296	2.26	1.00	1.96	508	0.05
	Male	214	2.45	1.12			
8. Most of my instructors use social media in their teaching.	Female	296	2.89	1.18	4.36	508	0.00
	Male	214	3.37	1.26			
9. The university provides students with training programs teaching them how to use social media to support learning.	Female	296	3.25	1.31	1.72	508	0.09
	Male	214	3.45	1.31			
10. Activities that require the use of social media in the learning environment are integrated in the university curricula.	Female	296	2.63	1.26	4.75	508	0.00
	Male	214	3.19	1.36			

Note: Dependent Variables is Barrier when using social media to support learning

Qualitative results from open-ended question. The open-ended question, "Do you have other comments or thoughts regarding using social media as educational tools to support learning?", asks the participants about their additional comments regarding using social media as educational tools to support their learning. Participants' responses to this question were divided into three categories which are:

a. Benefits of social media in learning.
b. Concerns related to the usage of social media for learning
c. Social media tools that should be included in the learning environments from the students' perspectives.
d. Suggestions to use social media effectively in the learning environments.

In the first category, participants reported that one of the advantages that social media provide the students is saving the students' time because these tools offer easy methods to search for information and resources. Other participants reported that social media technologies developed their English language: "Using social media tools reinforce my personal learning since I use them to develop my English language."

Additional thoughts that the participants revealed were that social media tools motivated students' attention when these tools were implemented in the learning environments; they made the communication between the students and the instructors easier and helped them to ask questions more freely than in class. Also, some participants reported that using social media technologies developed their learning not only academically but also personally. Other participants also reported that using social media as educational tools was a good idea since this generation is very attached to technologies.

However, while most of the participants believe that social media tools are beneficial and supportive for learning, and ask for the integration of such tools into the learning environments, a few students reported some concerns about using such tools for learning. Some participants believe that social media tools must be used to support students' learning but should not be used as a substitute to the traditional methods of teaching. Other participants reported that these tools have not yet been used by their instructors in the learning environments. Those participants argued that the instructors should be trained for the new learning environments where these emerging technologies would be implemented. This training should take into consideration all of the learning areas include the students, the learning environment, and the curriculum.

Also, the participants insisted that instructors should change their attitudes toward the adoption of social media to support students' learning. They reported that the university did not provide plans or strategies for how to integrate social media into the curricula, activities, or the learning ecologies. One participant reported, "Integrating social media tools into the learning environments to support learning was the students' effort not the instructors'."

Additionally, some of the participants reported concerns about the credibility of the information available at social media websites as they became a medium for sharing, exchanging, and creating information among users. Other students reported that their usage of social media applications and browsing through these sites sometimes interrupted them from studying and doing their assignments.

For the third category, participants reported examples of beneficial social media tools that should be included in the learning environments. One of these tools was

Instagram. Some of the participants reported that they hoped that their instructors would use Instagram for learning purposes such as to enhance their English language. Others reported that Dropbox was a good tool to share files and any materials related to the courses. Also, some participants saw YouTube as beneficial for their personal learning. They suggested that it would be beneficial if the instructors uploaded the course lectures on YouTube so that students could watch and repeat them any time at their own pace. Other participants saw WhatsApp and Twitter as good educational tools. For the WhatsApp, students suggested that the instructors create different groups using it as a medium for communication and for students' questions and answers. Additionally, other participants reported that using blogs designed specifically for the class courses to share thoughts, ideas, and discuss questions related to the curriculum with the instructors would be a great idea to support learning.

In the fourth category, some participants made some recommendations related to the usage of social media to support learning. Most of the participants suggested that social media must be integrated into the university curricula and the instructors should start using them as tools to aid the learning environments. Other participants recommended that Saudi universities and instructors should increase Saudi students' awareness of social media technologies and their risks and disadvantages in this era of the technology revolution.

Also, some participants suggested that there should be training programs to teach the instructors what the educational benefits of social media tools are and how to implement such tools into their teaching environments to effectively support students'

learning. These training programs could also be offered to the students in order to teach them how they can use social media tools to effectively support learning.

In addition to the training programs, some participants suggested that it is imperative to increase Saudi people's awareness regarding the importance of integrating social media technologies into Saudi students' academic achievements. However, other participants suggested that there should be educational programs designed to use social media tools as a medium to support students' learning and help the instructors to incorporate such programs into the learning environments where there will be digital learners.

Additional findings. In addition to the research questions, the researcher added two additional questions based on the preliminary findings of the study. These two questions are:

1. Are attitudes of the students and subjective norms related to students' intention to use social media to support learning?
2. Is there a relationship between students' intention to use social media to support learning and their actual use of the six tools of social media, which are Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype?

Question one: Are attitudes of the students and subjective norms related to students' intention to use social media to support learning?

Findings of this study show that subjective norm was significantly predicting attitudes of Saudi students toward using social media technologies to support their learning $r(508)= .43$, $p=.000$. Also, results show that there was a statistically significant

relationship between attitudes of Saudi students to use social media and their behavioral intentions to use such tools to support their learning, r(508)= .67, p=.00.

However, to examine the relationship between the three variables, attitudes of the students, subjective norm and behavioral intention, a partial correlation was conducted to test whether attitudes of the students related to their behavioral intention through the mediator which is subjective norm.

The results reflect that there was a significant drop in the relationship between attitudes of the students and their behavioral intentions (r=.67, becomes r=.58, *p*=00) through subjective norm; attitudes still relates to behavioral intention through subjective norm (See Table 27). This significant drop is evidence that subjective norm is a mediator, but it is not a complete mediator since it does not completely describe the relationship between attitudes of the students and their behavioral intentions (See figure 18).

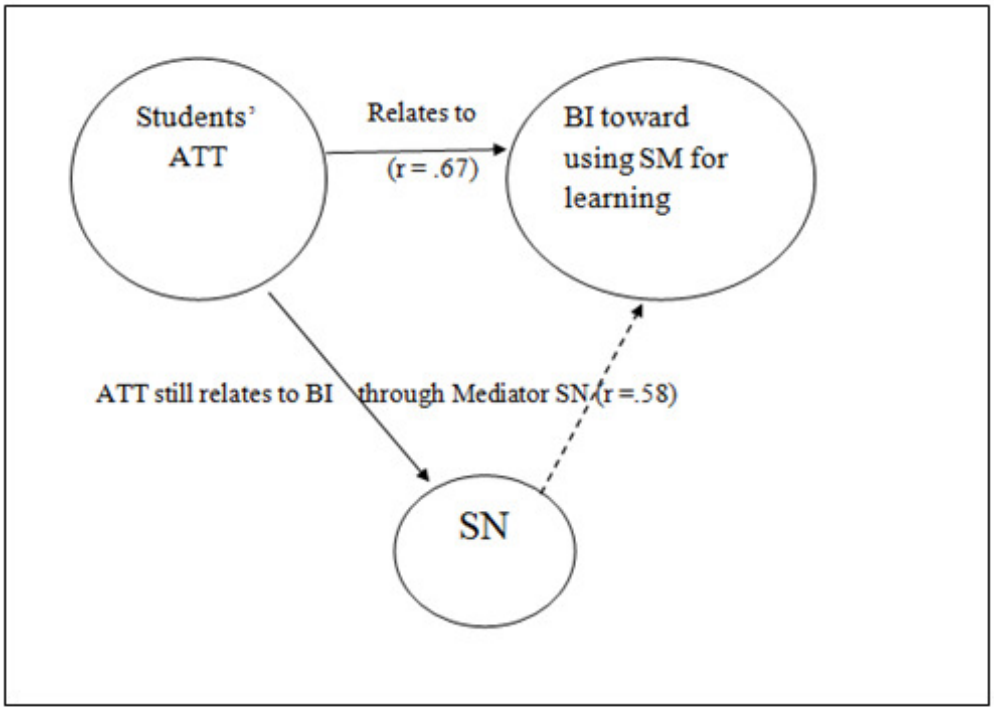
Table 27

Correlations between Attitudes of Saudi Students toward Using Social Media to Support Their Learning, Subjective Norm, and Their Behavioral Intention

Control Variables		ATT	BI	SN
-none-	ATT Correlation	1.00	0.67	0.43
	Sig		0.00	0.00
	Df		508	508
	BI Correlation	0.67	1.00	0.512
	Sig	0.00		0.00
	df	508		508
	SN Correlation	0.43	0.512	1.00
	Sig	0.00	0.00	
	df	508	508	
SN	ATT Correlation	1.00	0.58	
	Sig		0.00	
	df		507	

	BI	0.58	1.00
	Correlation		
	Sig	0.00	
	df	507	

Figure 18. Relationship between Attitudes of students, Behavioral Intention (BI), and Subjective Norms (SN)



Source: created by the researcher (2014)

Question two: Is there a relationship between students' intention to use social media to support learning and their actual use of the six tools of social media, which are Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype?

To examine the relationship between Saudi students' intentions to use social media to support their learning and their actual use of six tools of social media which are, Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype, a linear regression was conducted to examine whether or not there is a relationship between students' actual

usage of the six social media tools and their intentions to use such tools to support their learning.

As shown in Table 28, Saudi students' intention to use social media to support their learning was significantly related to their actual use of WhatsApp (β = .16, P= .000), Facebook (β = .11, p=.01), Wikipedia (β = .10, p=.02), YouTube (β =.10, p= .03), and Twitter (β =.077, P=.08). However, students' intention to use social media to support their leaning was not significantly related to the actual use of Skype (β = -.011, p=.801).

Table 28

Correlations between Saudi Students' Intentions to Use Six Tools of Social Media to Support their Learning and their Actual Usage

Model	Unstandardized Coefficient		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta (β)		
(Constant)	2.69	0.22		12.49	0.00
Facebook	0.06	0.03	0.11	2.37	0.02
Twitter	0.04	0.03	0.08	1.73	0.085
YouTube	0.08	0.04	0.1	2.17	0.03
WhatsApp	0.15	0.04	0.16	3.66	0.00
Wikipedia	0.07	0.03	0.1	2.27	0.02
Skype	-0.01	0.03	- 0.01	-0.25	0.8

Note: Dependent Variable is students' behavioral intentions to use social media to support learning

Chapter Summary

The purpose of this study was to investigate attitudes and intentions of Saudi students at King Abdul-Aziz University toward using social media technologies to support their learning. This chapter presents the results of the statistical analyses of the data collected in the study from 510 Saudi male and female students at King Abdul-Aziz University. This chapter covered descriptive statistics of the data, description of population and sampling, reliability analyses, research questions, results of the open

ended question, and chapter summary. Chapter 5 discusses the findings obtained from the research questions. In addition, it covers the limitations, implications of the current research study, and recommendations for future research.

Chapter 5

Discussion

Introduction

This chapter presents the purpose of study, description of participants, review of the research hypotheses, and discussion of the results obtained from the research questions. It also presents the study limitations, implications of the major findings, conclusions, and recommendations for future research.

Purpose of the Study

The main purpose of this study is to investigate attitudes of Saudi students at King Abdul-Aziz University toward using social media to support their learning. This study also investigates examples of social media tools that Saudi students use and interact with and the purpose of the usage of such tools. Additionally, the current study investigates barriers that face Saudi students at King Abdul-Aziz University when they intend to utilize social media to support their learning. The research was conducted to answer the following research questions:

1. What are Saudi students' attitudes towards using social media to support their learning, particularly at King Abdul Aziz University?
2. What are examples of social media technologies that Saudi students use, and what are the purposes for which Saudi students use these tools?
3. What are barriers facing Saudi students at King Abdul Aziz University when utilizing social media to support their learning?

4. How well do the selected variables students' experience with six examples of social media (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype), perceived usefulness of social media, perceived ease of social media use, subjective norm, conservativeness level, and age predict Saudi students' attitudes toward using social media to support their learning?
5. Is there a relationship between students' attitudes and their intentions to use social media to support their learning?
6. Are there any differences between Saudi male and female students in:
    a. Their attitudes towards using social media to support their learning
    b. The barriers they have encountered when utilizing social media for learning?

Research Hypotheses

Based on the above research questions, the researcher created the following hypotheses in order to test these questions:

H1: Saudi students at King Abdul-Aziz University have positive attitudes towards using social media to support their learning.

H2: The selected variables: students' experience with six example of social media(Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype), perceived usefulness of social media, perceived ease of social media use, subjective norm, conservativeness level, and age will predict Saudi students' attitudes toward using social media to support their learning.

H3: Saudi students' attitude is related to their behavioral intention to use social media tools to support their learning.

H4: There is a significant difference between Saudi male and female students at King Abdul-Aziz University in terms of:

a. Their attitudes toward using social media to support their learning.
b. The barriers they have encountered when utilizing social media for learning purposes.

Participants

The participants in this study are Saudi male and female students at King Abdul-Aziz University, Saudi Arabia. The total sample size for the study is 510 participants from all of the 24 colleges at the university. In this study, there are 296 female participants who represent 58.04% of the total participants, and 214 male participants who represent 41.96% of the total participants.

The data collected consists of the participants' responses to an electronic survey, which is the main instrument in the current study (See Appendix F). In this survey, there were two types of questions: close-ended questions and open-ended questions. The questionnaire was expected to take approximately 15-20 minutes to complete. The survey consisted of 80 items distributed in eight parts. The following are the survey sections with the number of survey items for each section:

I. Social Media Usage and Purposes (6 items)

II. Examples of Social Media and Networking Sites (7 items)

III. Experience with Social Media (6 items)

IV. Attitudes toward Using Social Media to Support Learning (18 items)

V. Factors to Use Social Media for Learning Purposes (25 items)

VI. Barriers to Utilize Social Media in Learning (10 items)

VII. Open-Ended Question (1 item)

VIII. Demographic Information (7 items)

Discussion of the Findings of the Research Questions

Research question one. What are Saudi students' attitudes towards using social media to support their learning, particularly at King Abdul Aziz University?

In the fourth part of the survey, participants were asked to rate their degree of agreement with nine statements to determine their attitudes toward usage of social media to support their learning. Table 11 in Chapter 4 presented the descriptive statistics for these 9 attitudes items.

As shown in Table 11 in Chapter 4, the overall attitudes of Saudi students at King Abdul-Aziz University toward using social media tools to support learning was positive with a mean of 3.99 (SD= .76). This is consistent with the findings from Wang et al. (2012) when they examined course participants' attitudes toward using social media to improve Continuing Medical Education (CME). Findings of the study show that the CME course participants had positive attitudes toward using social media for educational purposes. This result is also consistent with the social learning theories of Bandura (1977) and Vygotsky's (1962) that emphasize that all learning is social and accomplished through social modeling and social interaction.

Participants' responses in this scale ranged from 3.51 to 4.28, which indicates positive attitudes based on the Likert scale. The items that demonstrated the highest ratings on the scale were items 3, 4,7, 2, 6, 1, and 5, with means M=4.28, 4.11, 4.08, 4.07, 4.05, 4.00 respectively. On the other hand, the items that presented the lowest rating on the scale were items 8 and 9 with means M=3.84, 3.51 respectively.

Item 3, “In my opinion, using social media to support learning is a good idea.” rendered a mean of 4.28 (SD= .86). This indicates that Saudi students at King Abdul-Aziz University believe that using social media to support learning is a good idea. Additionally, Saudi students believe that learning online using social media technologies is enjoyable. This was reflected in item 4, “I find learning online using social media enjoyable.” that rendered a mean of 4.11(SD=1.02). Moreover, item 7, “Communicating with my classmates and instructors using social media is a good learning experience.” rendered a mean of 4.08 (SD=.962). This indicates that Saudi students believe that using social media tools to communicate with their classmates and instructors is a good learning experience.

Saudi students at King Abdul-Aziz University believe that social media tools are important tools to support their learning. This was shown in their responses to item 2, “Social media are important because they support my learning.” with a mean of 4.07 (SD=.94). Furthermore, item 6, “I like to engage myself with my classmates in collaborative projects using social media.” rendered a mean of 4.05 (SD=1.03). This indicates that Saudi students are willing to use social media technologies to engage with their classmates to learn collaboratively. Saudi students also hold positive attitudes toward the adoption of social media technologies for their learning. This was reflected in their responses to item 1, “I like to use social media for learning purposes.” that rendered a mean of 4.04 (SD=.97).

The findings also showed that using social media technologies for learning is very desirable to Saudi students at King Abdul-Aziz University. This was reflected in the participants’ responses to item 5, “Using social media for learning is very desirable for

me,**"** that rendered a mean of 4.00 (SD=1.03). Additionally, participants reported that they would prefer to attend a class where the instructors use social media technologies in their teaching environments. This was shown in item 8, "I prefer attending a class where the instructor is using social media in his/her teaching." that rendered a mean of 3.84 (SD= 1.1). Finally, participants' response to item 9, "Once I started using social media to support my learning, I found it difficult to stop." rendered a mean of 3.51 (SD= 1.03). This reflects that Saudi students at King Abdul-Aziz University believe that they found it difficult to stop using social media technologies to support their learning.

Students' responses to these 9 items measuring their attitudes toward using social media to support learning are consistent with their responses for the purposes for which they use social media. Results revealed that the second highest rated purpose of using social media was that they use social media for learning purposes, with a mean of 3.84 (See Table 11 in Chapter 4). However, students' responses to the attitude items reflected that social media are important and meaningful to their learning, which supports the findings of Swan and Shea (2005), who indicate that students perceive themselves as interacting socially using online tools and that this social interaction was meaningful to their learning.

Research question two. What are some examples of social media technologies that Saudi students use, and what are the purposes for which Saudi students use these tools?

In the first part of the survey, participants were asked to rate how often they use examples of the most popular social media technologies, including Facebook, Twitter,

YouTube, WhatsApp, Wikipedia, Skype, and/or other tools. Table 12 in Chapter 4 presented the descriptive statistics for these seven items.

The results show that the most frequently used tool by Saudi students at King Abdul-Aziz University was WhatsApp. Participants reported that they use WhatsApp frequently (M=4.60). The results also showed that the highest experience with social media tools that students had was with WhatsApp (M=4.58). This result is consistent with the instructors' responses to the interview questionnaire. Results of the instructors' questionnaire revealed that most of the Saudi instructors use WhatsApp with their students whether for communication, class announcements, or answering and asking questions related to the courses.

This is also consistent with Reuters (2013) when he claimed that tech-savvy young Saudis are increasingly moving away from traditional Telephony provided by the kingdom's three mobile operators, Saudi Telecom Co (STC), Etihad Etisalat (Mobily) and Zain Saudi toward apps such as WhatsApp. One reason Reuters mentions regarding the increasing usage of WhatsApp among Saudis is that it is a free and easy-to-use communication application. Reuters argues another reason why WhatsApp is preferred is that because unlike some other instant messaging apps, WhatsApp has the option for only administrators to know the identity of group members.

The second most frequently used tool by the participants was YouTube. Participants report that they often use YouTube (M=4.12). This result is consistent with participants' responses to their experience with social media tools, as participants' second highest ranked experience they have was with YouTube (M=3.97). This result is also consistent with Reuters (2013) when he argues that Saudi Arabia now has the biggest

number of viewers per capita of YouTube globally, which has spawned a thriving industry producing homemade videos that is pushing at the boundaries of traditional Saudi programming. This result also supports the findings of Perlov and Guzansky (2014) that reveal that the number of Twitter and YouTube users in the kingdom of Saudi Arabia is the highest per capita in the world, which indicates how connected the kingdom's residents are.

Result also show that the third most frequently used tool and the third highest rated by the participants was Twitter at (M=3.57). This result is consistent with the participants' responses to rate their level of experience to social media tools. This result is also consistent with Peerreach's (2013) statistics regarding Saudis' usage of Twitter as a social media application: Saudi Arabia had the highest percentage of Internet users active on Twitter globally, as one-third of the country's online population are active monthly Twitter users, accounting for 2.3 percent of all tweets.

Participants report that they sometimes use Wikipedia (M=3.15), Facebook (M=2.89), and Skype (M=2.48). These results are the opposite of Wang's et al. (2012) findings that reveal that the most common social media students use are Facebook (50%), Skype (43%), and Wikis (40%) for educational purposes.

Results also reveal that participants rarely use other social media tools and applications. These other tools, as the participants reported, include 4.1% Instagram, 2.1% Telegram, .39% LinkedIn, .59% Keek, .59% Tango, 11% Google plus, .74% Line, .19% Wiggio, 2.9% BlackBerry Messenger, .98% path, .59% online games, .19% Pinterest, .19% Yahoo, and .98% Gmail sources (e.g., Gmail Chat). The less frequent use

of such tools could be because most are new applications and the participants need more experiences with them.

In the second part of the survey, participants were asked to rate how often they use social media technologies for different purposes including: social communication, news, learning, entertainment, or/and other purposes. Table 13 in Chapter 4 represented the descriptive statistics for these purposes.

Results show that Saudi students' use social media most frequently for social communication (M=4.27). This result is consistent with Obiad's study (2011) that reveals that Saudi students at Al-Imam Mohammad Bin Saud Islamic University, Riyadh, use social networking sites to socially communicate with others.

Results also reflect that the second most frequently mentioned purpose for which Saudi students use social media was for learning purposes (M=3.83). This is consistent with what this researcher found in the results of question one that indicates Saudi students have positive attitudes (M=3.99) towards using social media to support learning. This result is consistent with Wang's et al. findings that the vast majority of Continuing Medical Education (CME) participants utilize social media for personal reasons and education.

Research question three. What are barriers facing Saudi students at King Abdul Aziz University when utilizing social media to support their learning?

Participants were asked to rate their degree of agreement with ten statements that represent the major barriers that could affect Saudi students' usage of social media to support their learning. Table 14 in Chapter 4 presented the descriptive statistics for the ten barrier items.

Students' responses in this scale ranged from 1.36 to 4.12. The overall barriers that Saudi students at King Abdul-Aziz University have in using social media to support their learning were positive and moderate (M=2.62, SD=.55); a high score indicates the factor is considered a barrier for Saudi students at King Abdul-Aziz University to use social media to support learning, and a low score indicates the factor is not a barrier for the students to use social media tools to support learning. The items with the highest rating on the scale were items number 4 and number 5, while the means for the other eight barrier items ranged from 1.36 to 3.33.

The results show that Saudi students at King Abdul-Aziz University perceive that some social media contents are against their Islamic religion: "Some of the social media contents are against my religion." with a mean of 4.12 (SD=.1.11). This supports the instructors' responses to the interview questionnaire and the students' responses to the open-ended question. Some instructors report that one challenge preventing the instructors at King Abdul-Aziz University from adopting social media for teaching is the students' negative attitudes toward the inappropriate materials posted on social media that they consider to be against their Islamic religion; these include, as the instructors reported, music, pornographic, inappropriate dressing for women, inappropriate advertisements, and sexual materials.

This supports Lenartz's (2013) study that mentions how the posting of inappropriate materials is the issue that appears most frequently in the media. This example involves the city of Phoenix's former chief spokesperson, David J. Ramirez. According to Wong (2009), Ramirez was fired for posting inappropriate materials on

Facebook including profanity, a homophobic slur, jokes about religions, and sexual comments on the page of an intern.

Students also report in the open-ended question one reason they did not prefer social media usage for learning is that some of the social media websites contain music and inappropriate clips and pictures. This is consistent with the findings of Perlov and Guzansky (2014) who argue that the official religious establishments see social media users as a real threat that requires close monitoring and censorship, especially regarding content that is damaging to Islam and against its religious values.

Another major barrier for Saudi students at King Abdul-Aziz University was concerns about privacy and security issues related to the usage of social media by the students: "I am concerned about privacy and security problems related to using social media." with a mean of 3.72 (SD=1.12).

This result supports the instructors' and the students' responses as they report that they are concerned about the privacy and security issues related to social media usage especially in a closed society such as Saudi Arabia. This result is also consistent with the findings of Boyd (2012); boyd and Ellison (2007); Chakraborty et al. (2013); and Lenartz (2013) that reveal that along with the adoption of social media and social networking sites by people, concerns are reported regarding risky issues regarding privacy leakages, users' confidentiality, and information sharing hazards.. Lo (2013) states that "Some participants also made comments on how privacy was an obstacle between the learners and the teacher" (p. 72).

However, in a closed and conservative society such as Saudi Arabia, there is growing concern over how social media and social networking sites enable Saudis to

collect and use the personal information of others and how this information is shared by Saudi people. Thus, privacy for social media users is a major challenge that needs to be investigated in depth not only in Saudi Arabia but other areas of the world as well.

Research question four. How well do the selected variables students' experience with six examples of social media (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype), perceived usefulness of social media, perceived ease of social media use, subjective norm, conservativeness level, and age predict Saudi students' attitudes toward using social media to support their learning?

A multiple regression analysis was conducted to evaluate how well eleven variables of students' experience with six examples of social media (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype), Perceived Usefulness of social media (PU), Perceived Ease of Use of social media (PEOU), Subjective Norm (SN), Conservativeness level, and Age could predict the overall attitudes (ATT_Average) of Saudi students at King Abdul-Aziz University toward using social media to support their learning. The linear combination of the eleven variables was significantly predictive of the overall attitudes of Saudi students at King Abdul-Aziz University toward using social media to support their learning, with $F(13,454)= 51.42$, $p< .05$.

The sample multiple correlation coefficient was $R=.77$, and the adjusted R^2 for the overall multiple regression analysis was .58, indicating that approximately 58% of the variance in attitudes of Saudi students at King Abdul-Aziz University toward using social media tools to support their learning can be accounted for by the linear combination of the eleven variables entered in the model, which are: experience with six tools of social media (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype),

PU, PEOU, SN, conservativeness, and age. This means that 58% of variance of Saudi students' attitude is explained by these selected predictors.

The results show that five of the predictors were significant predictors in the model. These predictors include PU with a standardized beta coefficient of .63 (p=.00), SN with a standardized beta coefficient of .12 (p= .001), and PEOU with a standardized beta coefficient of .11 (p=.002). However, age and experience with Skype were nearly significant predictors with a standardized beta coefficient of .06 (p= .053) for age, and standardized beta coefficient of .07 (p= .057) for experience with Skype.

Accordingly, the *p*-values for the other predictors which are experience with Facebook, experience with Twitter, experience with YouTube, experience with WhatsApp, experience with Wikipedia, and Conservativeness level, were larger than .05, which means these independent variables were not significant predictors of attitudes of Saudi students at King Abdul-Aziz University to support their learning.

The results show that PU of social media tools for learning, SN, and PEOU of social media were significant predictors of Saudi students' attitudes toward using social media to support their learning at King Abdul-Aziz University. This means that the higher the perceived usefulness, perceived ease of use, and subjective norm, the more positive the attitude of Saudi students toward using social media tools to support their learning. These results are consistent with the findings of Davis (1989); Rogers (2003); Masroom and Hussein (2008); Hartshorne and Ajjan (2008); and Shittu et al. (2011) that conclude that perceived usefulness, perceived ease of use, and subjective norm are significant determinants of people's attitude toward adoption of technologies such as social media.

Rogers (2003) found that the higher the perceived usefulness, ease of use, and compatibility of the technology, the more positive the attitude toward using technology. Davis (1989) also found that when people perceive any technology as easy to use and useful they hold positive attitudes toward this technology. Masrom and Hussein (2008) concluded that perceived usefulness has significant impact on attitudes toward adoption of the electronic collaboration technology. Another study conducted by Masrom and Hussein (2008) applying the Theory of Reasoned Action (TRA) by Ajzen and Fishbein (1980) reveal that subjective norm positively influence participants' attitudes to shop online.

In addition, Hartshorne and Ajjan (2008) found that students' attitude to use web 2.0 technologies were influenced by perceived usefulness, ease of use, and compatibility of web 2.0. Another study by Shittu et al. (2011) concludes that perceived ease of use, perceived usefulness, and subjective norm are significant predictors of students' attitude to the use of social software.

However, the results of the current study reveal that perceived usefulness of social media for learning was the strongest predictor of the average attitudes of Saudi students toward using social media to support their learning among all of the other predictors in the model, which are perceived ease of use, subjective norm, experience with Skype, and age. As shown in Table 23 in Chapter 4, perceived usefulness contributes six times as much as the other predictors in the model to the attitude of the participants (β=.63, p=.000).

This result is consistent with the participants' responses to twelve items in Table 16 in Chapter 4 reflecting how the students perceived the usefulness of social media to

support their learning. The average was high and positive (M=4.1) and ranged from 3.9 to 4.31. This result reflects that as the participants perceive social media as useful tools, they hold a positive attitude toward using them to support their learning. This also supports the findings that the participants are using social media tools for learning purposes. When the participants were asked to report their purposes of social media usage, the second most mentioned purpose was for learning. Also, the result supports Davis' (1989) findings that perceived usefulness had a significant and strong effect on attitude, while ease of use had smaller but also significant effect on attitude toward adopting electronic mail.

However, for the two other predictors which are age and experience with Skype, results indicate that they were nearly significant predictors of the average attitudes of the students, with a standardized beta coefficient of .06, (p= .053) for age, and standardized beta coefficient of .07, (p= .057) for experience with Skype.

The average age of the participants was 25.92 and ranged from 18 to 55. This is consistent with the findings of Perlov and Guzansky (2014) that finds the average age of Saudi users who use social media ranges from 26 to 55, with male users (87 %) far outnumbering female users. The results reflected that age is nearly a significant predictor of the participants' attitudes toward using social media to support learning (p= .053). This means that the younger the participants are, the more positive attitudes they have toward using social media to support their learning. This result supports studies that find users' age predict their attitudes toward using technologies such as computer and the Internet applications. One of these studies is Wang et al. (2012) that concludes students' favorable attitudes toward social media utilization for their medical courses were

associated with younger age. Also, Porter and Donthu (2006) found that people's age was associated differentially with their beliefs about the Internet; these beliefs influence a consumer's attitude toward the usage of the Internet and its applications. Czaja et al. (2006) also finds that older adults in the United States typically have more difficulty than do younger people in learning to use and operate current technologies. Another study conducted by Pew Internet and America Life Project (2004), reports that seniors who use the Internet for information searching and emailing report lower rates of use than younger users do.

However, among the six social media tools (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype), participants' experience with Skype was the only nearly significant predictor of their attitudes toward using social media to support learning. Although Skype was the least used tool by the participants (M=2.48), and the tool with which participants have the least experience (M=2.92), results showed that it was the only application of social media to predict the attitudes of participants. This reflects that the less experience participants have with social media tools, the more positive attitude they hold toward using such tools to support their learning.

This was contradictory to the findings of Seo (2013), who finds that there is a relationship between students' prior experience of social media, their technical skills, and their beliefs or attitudes toward social media. Seo concluded that students with substantial gaming experience exhibit high technical skills and beliefs in Second Life.

The results were the opposite of the findings of Rogers' (2003) Theory of Innovation Diffusion (TID), which concludes that adopters judge an innovation based on their perceptions in regard to five attributes of the innovation. One of these attributes is

Triability. An innovation will experience an increased rate of diffusion if potential adopters perceive that the innovation can be tried on a limited basis before adoption. Triability, as Rogers argued, is the degree to which an innovation may be experimented with on a limited basis. It is the opportunity to try an innovation before committing to use it. This means that as long as the adopters perceive the innovation can be tried and experimented on a limited basis before adoption, they will hold a positive attitude toward the adoption of such an innovation as they have gained a prior good experience with this tool. Thus, this result shows that Skype was one predictor of students' attitudes that might have happened by chance in this model.

However, as shown in Table 22 in Chapter 4, results reflected that social media tools such as Facebook, Twitter, YouTube, WhatsApp, and Wikipedia (with *P*-values larger than .05) were not significant predictors of the participants' attitudes although the participants reported that they had good experiences with such tools. This could be explained by Rogers' theory of Innovation Diffusion that concludes that newness in an innovation need not just involve new knowledge because someone may have known about an innovation for some time but not yet developed a favorable or unfavorable attitude toward it, nor has that person they adopted or rejected it. This indicates that participants might have good experiences with Facebook, Twitter, YouTube, WhatsApp, and Wiki, but may not yet have developed a favorable or unfavorable attitude toward using them for learning purposes.

The final variable used to examine whether it predicts attitudes of the students to use social media to support learning was conservativeness. The results showed that conservativeness was not a significant predictor of the students' attitudes toward using

social media to support learning (p=.55). This result did not support the research hypothesis that the more conservative a person is, the less positive attitude he/she holds toward using social media for learning.

However, the findings that conservativeness was not related to the students' attitudes toward using social media is consistent with the research results that the majority of the participants (42.8%) are more liberal than their parents or at the same conservative level as their parents (28.6%) (See Table 19 in Chapter4) and have positive attitudes toward using social media for learning (M=3.99, SD=.76). This is also consistent with the findings of Perlov and Guzansky (2014), who conclude that the conservatives, radical forces, and religious clerics have a more dominant presence on social networks in Saudi Arabia and use such tools intensively. These different groups use them for indoctrination, mobilization, and as a platform for public messaging. Also, the radical clerics are the largest and most popular group in Saudi Arabia whom Saudis follow on social networking sites such as Twitter.

This reflects that even though Saudis are conservative and religious people, they are dominant in social media since they use such tools for religious influence. Those conservative people's usage of social media as mentioned in the study of Perlov and Guzansky (2014) reflects that Saudis have positive attitudes toward using such tools according to the Theory of Planned Behavior (TPB) by Ajzen (1985). TPB argues that users' intention to use a technology is a rational decision based on personal (their attitudes) and social variables. The personal variable, which is attitude toward behavior, reflects a user's positive or negative personal beliefs regarding the use of technology in

producing favorable outcomes. This means that the intensive usage by Saudis of social media implies that they hold a positive attitude toward the use of social technologies.

Research question five. Is there a relationship between Saudi students' attitudes and their intentions to use social media for learning purposes?

A Pearson Correlation Coefficient Analysis was conducted to test the relationship between the overall attitudes of Saudi students at King Abdul-Aziz University and their behavioral intention to use social media tools to support learning.

As shown in Table 24 in Chapter 4, the correlation between the overall attitudes (M=3.99, SD= .756) of Saudi students at King Abdul-Aziz University and their behavioral intention (M=4.2, SD= .818) was significant, r(508)= .67, p=.00. Thus, the relationship between the overall attitudes of the students and their behavioral intention toward using social media to support learning was positive at $p<.05$. This result reflects that the more positive attitude the students have, the more likely they intend to use social media to support their learning and vice versa; the more negative attitudes the participants have, the less likely they intend to use social media to support their learning.

This result supports the findings of Masrom and Hussein (2008), who conclude that attitude was the most significant predictor to shop online. Moreover, studying users' attitudes toward adopting online banking applying the theory of Planned Behavior (TPB), Masrom and Hussein (2008) reveal that attitude of the users was significant determinant of behavioral intention toward online banking. This result is also consistent with the findings of Hartshorne and Ajjan (2008) that attitude is the strongest determinant of students' behavioral intention to the use of web 2.0 technologies and the findings of

Shittu et al. (2011) who found that students' attitude was stronger in determining intention to use social software.

Research question six. Are there any differences between Saudi male and female students in the two following areas:

a. Their attitudes towards using social media to support their learning
b. The barriers they have encountered when utilizing social media for learning?

An independent sample t-test was conducted to examine the gender differences regarding the two survey subscales of attitudes and barriers. The statistical results for these results were displayed in Table 25 and Table 26 in Chapter 4.

The difference in male and female Saudi students' attitudes toward using social media to support learning was not statistically significant, with t (508) = -.12, p=0.90. The mean of the attitudes for male students was M=4.00, with SD=0.82, while the mean of attitudes for female students was M= 3.99, with SD=0.71. Thus, both Saudi male and female students at King Abdul-Aziz University had positive attitudes toward using social media to support their learning.

This result supports the findings of Huang et al. (2013) that although there were significant differences between genders' intention to use six web 2.0 applications (blog, wiki, social networking tools, online video sharing tools, online game, and immersive virtual environment), such gender difference was not found on social networking tools and online video sharing tools. Also, this finding is consistent with the results of Mossberger, Tolbert, and Stansbury (2003), who conclude that in the increasing usage and access to the Internet by the net generation who are exposed early to the computer

and the Internet applications and services, gender differences could be diminished and the gender digital divide could be minimized. This is consistent with Saudi male and female students' at King Abdul-Aziz University responses as they report that they have access to the internet and computer, nearly all of them have smart devices, and have good experience with the new emerging technologies.

This result is not consistent with the findings of Shashaani (1994), Durndell and Thomson (1997), Li, Kirkup, and Hodgson (2001), Sherman et al. (2000), Jackson et al., (2001), Joiner et al. (2005), Kayaoglu (2012), and Huang et al. (2013) that conclude that there are gender differences between male and female users. These results reveal that males are more competent and have more experience and more positive attitudes towards technology aids, computers, and the internet, and females have much higher anxiety, less competence, and a less positive attitude toward using the Internet and its applications than do males.

However, results showed that gender differences were found in the barriers that Saudi male and female students have encountered when they intend to use social media to support learning. As shown in Tables 25 and 26 in Chapter 4, the difference in the barriers that male and female students have encountered was statistically significant, with $t(508) = -2.96$, $p < .05$. The mean of the overall barriers that male students have encountered was 2.69 with SD=.51, while the mean of the overall barriers that female students have encountered was 2.57 with SD=.47. This means that male students at King Abdul-Aziz University perceive more barriers than female students in their usage of social media for learning purposes.

One of the significant differences was found in "Most of my instructors use social media in their teaching." with t(508)= -4.36, *p*=.00. Female students (M=2.89, SD=1.18) were more likely to report that their instructors use social media in their teaching than male students (M=3.37, SD=1.26). This means that instructors at King Abdul-Aziz University who teach female students tend to use more social media in their teaching than the male instructors who teach male students. This indicates that a lack of social media usage by male instructors is a barrier to male students at King Abdul Aziz University. This result supports the findings of Almekhlafi and Almeqdadi (2010), who conclude that female teachers integrate technology in their classrooms more than male teachers do despite the fact that female teachers were more concerned about technology availability than male teachers do. Also, this result is consistent with the students' response regarding how often their instructors use social media tools to support learning. As shown in Table 29, the results indicate that instructors rarely use social media to support students' learning, with average mean of 1.89 (SD= 1.26).

Table 29

Means and Standardized Deviation for Instructors' Usage of Social Media to Support Students' Learning

Usage of SM by Instructors	Mean	SD
1. Instructors use Facebook in classes	1.78	1.19
2. Instructors use Twitter in classes	2.04	1.37
3. Instructors use YouTube in classes	2.15	1.36
4. Instructors use WhatsApp in classes	3.01	1.58
5. Instructors use Wikipedia in classes	1.83	1.23
6. Instructors use Skype in classes	1.31	0.79
7. Instructors use other social media	1.79	1.33
Average	1.89	1.26

Scale: 1= Never use, 2= Rarely, 3=Sometimes,4= Often, 5= Frequently

However, as there are two separate campuses at King Abdul Aziz University, one for male and the other for female students, there might be different cultures of learning and teaching that lead male faculty to treat and use social media differently in the learning environments. Another reason why female instructors use social media more than male instructors at King Abdul-Aziz University was reported by female students who say that activities requiring the use of social media in the learning environments are integrated in the curricula. As most of the Saudi female students are majoring in Human Studies, instructors at King Abdul Aziz University teaching Human Studies report that they use social media in their teaching more than those teaching Science Studies.

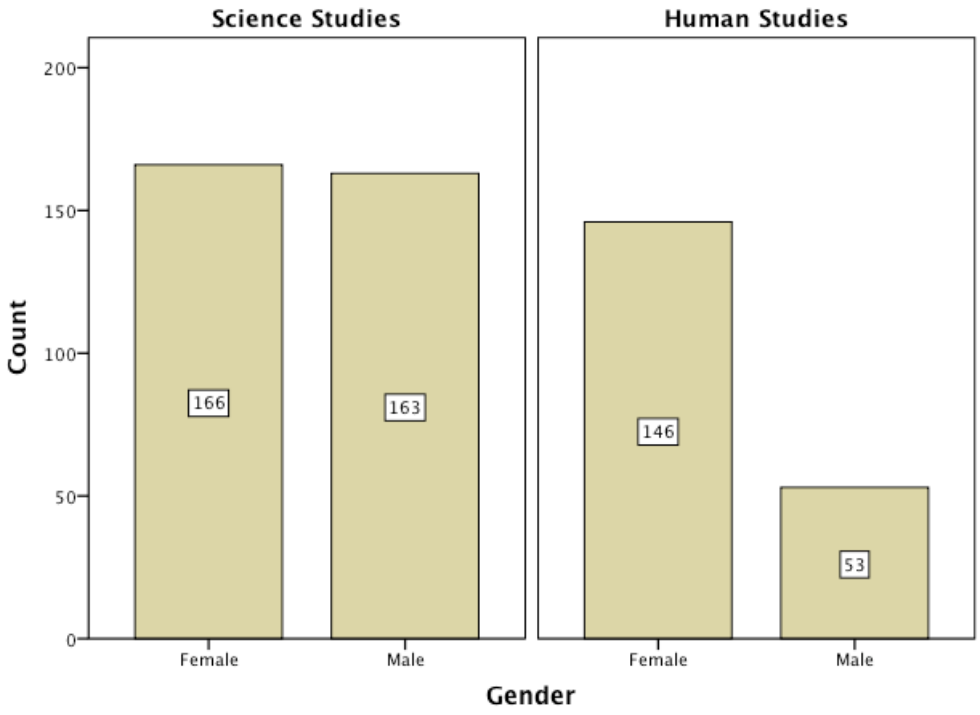
Also, female students (M= 2.26, SD= 1.00, & P= .05) report that when the instructor used social media into the learning environment, the students took the instruction seriously more than male students (M= 2.45, SD = 1.12, and p=.05).This means that male students do not take the integration of social media by their instructors seriously, which is considered a barrier to both the male students and instructors at King Abdul- Aziz University.

Another significant difference was found in "Activities that require the use of social media in the learning environment are integrated in the university curricula." with t(508)= -4.75, p=.000. Female students (M=2.63, SD=1.26) report that activities requiring the use of social media are integrated in the curricula more than male students (M=3.19, SD=1.36). This means that the lack of the integration of activities requiring the usage of social media in learning environment is another barrier facing male students at King Abdul-Aziz University. This result supports the findings of Karasavvidis (2010), Wang et al. (2012), and Seo (2013) who conclude that a potential barrier to utilize social

media technologies is the lack of principles of integrated design that involve online social media effectively in the design of classrooms instruction and activities. Without a solid educational plan and principles for instructional designs, educators and students may find themselves lost in an ever-blurring digital landscape.

In King Abdul-Aziz University, male instructors might perceive that their curricula are not ready to use social media technologies in their teaching. Also, the nature of the major is an important factor that can affect the integration of social media into the curricula. Most of Saudi female students at King Abdul-Aziz University are majoring in Human Studies (See Figure 19). Additionally, according to the instructors' interview responses, those teaching Human Studies report that they use and integrate social media into their teaching more than those teaching Science Studies.

Figure 19. Gender Difference in Terms of Major



Additional significant difference was found in "I can understand the social media websites that are in English", with t(508)= 2.38, p=.02. Male students (M=2.14, SD=1.19) were found to understand social media websites that are in English better than female students (M=2.39, SD=1.21). This means that language is a barrier facing female students at King Abdul-Aziz University when utilizing social media. This result is consistent with the findings of Alaugab (2007), who finds that a major barrier that Saudi female students at Al-Imam Muhammad Bin Saud Islamic University have encountered when learning online was their English language ability. Female students report that language is a major barrier when learning online because most of the online technologies, the studies, and the research available on the Internet are in English. This is also consistent with the findings of Wilson (1992), who finds that the language used in technology fields is male-oriented and may alienate females and prevent them from participating in these fields.

Additional findings. In addition to the research questions, the researcher added two additional questions based on the preliminary findings of the study. These two questions are:

1. Are attitudes of the students and subjective norm related to students' intention to use social media to support their learning?
2. Is there a relationship between students' intention to use social media to support learning and their actual use of six tools of social media, which are Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype?

For the first question**,** the findings of this study show that subjective norm significantly predicted attitudes of Saudi students toward using social media technologies

to support learning r(508)= .43, p=.00. The results also show that there was statistically significant relationship between attitudes of Saudi students to use social media and their behavioral intention to use such tools to support learning, r(508)= .67, p=.00.

However, to examine the relationship between attitude of the students, their behavioral intentions, and subjective norm controlling for subjective norm as a mediator, a partial correlation was conducted to examine whether or not there are relationships between the three variables. Results showed that attitude of the students still relates to their behavioral intentions through subjective norm as a mediator (r value drops down from .67 to .58), as shown in Table 27, Chapter 4. This means that both attitude of the students and subjective norm are determinants of the behavioral intentions of Saudi students at King Abdul-Aziz University to use social media to support learning.

This result is consistent with the findings of the Theory of Reasoned Action by Fishbein and Ajzen (1980) that individual behavior is driven by behavioral intention where behavioral intention is a function of two basic determinants, one personal in nature (an individual's attitude toward the behavior), and the other reflecting social influence (subjective norm surrounding the performance of the behavior).

For the second question, a linear regression was conducted to examine whether there is a relationship between students intention to use social media to support learning and their actual use of six tools of social media tools, which are Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype.

As shown in Chapter 4, Table 28, Saudi students' intention to use social media to support their learning was significantly related to their actual use of WhatsApp (β = .16, P= .000), Facebook (β = .11, p=.01), Wikipedia β (= .10, p=.02), YouTube (β =.10,

p= .03), and Twitter (β =.077, P=.08). This indicates that Saudi students at King Abdul-Aziz University who have positive attitudes toward using social media to support learning, also have positive intention to use such tools; their intentions are positively related to their actual use of Facebook, Twitter, YouTube, WhatsApp, and Wikipedia.

This supports the findings of Hartshorne and Ajjan (2008) that show participants' behavioral intention was a strong determinant of their actual behavior or actual use of web 2.0 technologies. However, students' intentions to use social media to support leaning was not significantly related to the actual use of Skype (β = -.011, p=.801). This was reflected in the results that Skype was the least used tool by the participants (M=2.48) and the tool with which participants also have the least experience (M=2.92). This might be because many substitute applications are emerging every day, especially free text chatting applications.

Limitations of the study

The current study has limitations that should be considered in future related studies. According to the instructors' interview responses, one barrier that Saudi instructors face when intending to incorporate and encourage students to use social media technologies to support their learning is that not all students have access to the Internet at their homes. This leads to another limitation, which is that non-respondent students might have different attitudes toward using social media to support learning from those who participated in the study.

Another limitation of the study is that this study was conducted in one of Saudi Arabia's universities, King Abdul-Aziz University; therefore, the findings might not be generalized to other universities. An additional limitation is that participants might not

have responded honestly to the survey questions even thought they were informed that their responses would remain anonymous and confidential since it relied on self-evaluation. The last limitation of the study is that the participants of the study were selected according to their willingness to participate in the study and complete the survey; thus, the participants of the study were not randomly selected.

Implications

This study investigated Saudi students' at King Abdul-Aziz University, attitudes toward using social media to support their learning. It was also designed to discover barriers facing the students when utilizing social media for learning purposes. Additionally, the current study investigated examples of social media Saudi students at King Abdul-Aziz University use and interact with and the purposes of using such tools.

The findings of this study have practical benefits for both educational administrators and faculty. Shittu et.al (2011) state that "Coming up with a way of taking advantage of this software to support learning will serve the entire education system a positive gain than allow it to take advantage of our student since they have chosen to make it a medium of interaction among themselves" (p. 205). Results of this study indicated that Saudi students at King Abdul-Aziz University have positive attitudes toward using social media to support their learning. However, adaption of such tools by Saudi instructors at King Abdul-Aziz University and integration of these tools into their teaching environments would help the students to support their formal learning in addition to their informal learning.

Administrators should encourage faculty to integrate social media into their teaching by developing the necessary technological infrastructure in the classrooms, such

as high speed internet and computers. Also, administrators should provide faculty with workshops, training programs, and seminars to train and teach the faculty how to use social media effectively in order to support students' learning. Effective methods that help instructors to successfully use social media for instructional delivery purposes need to be studied. Administrators also should provide students with training programs and workshops on how to utilize social media technologies for learning purposes. Administrators should also find a way for buying a version of Facebook that does not include the advertisements function and allow faculty to use alternative tools such as Edmodo application which has the same functions as Facebook but more secure platform than Facebook. Faculty also should think of effective ways of using WhatsApp as educational tool as it was the most used tool by the participants in this study. One suggestion might be using WhatsApp to assign different groups of study, collaborative project, or send videos and audios related to the subject matters.

Recommendations

Based on the results of this study, several recommendations are offered by the researcher.

1. Institutions should provide faculty with curricula plans and activities that require the implementation of social media technologies into the learning environments.
2. Institutions should encourage faculty to move toward the integration of social media into their teaching environments by providing them with training programs, workshops, and conferences.
3. Institutions should address the issue of building infrastructure.

4. Administration should encourage faculty to develop their personal learning about implementing social media technologies into their teaching environments by attending relevant workshops and conferences so that they can better support students' learning.
5. Faculty should keep up -to- date with the new developments in the technology field to modernize their approach in teaching.
6. Institutions should provide students with training programs and workshops to teach them how to utilize social media technologies for learning in order to develop their academic performances.
7. Institutions should provide students with seminars and workshops that develop students' awareness regarding privacy and security issues related to the usage of social media in general and particularly for learning. This awareness of digital ethics should be integrated into the curricula plans.
8. Institutions should provide female students with courses that help them develop their English language in order to help them better understand social media and the internet web-based applications that are in English so that they can and harness such technologies effectively for learning and academic purposes.
9. Institutions should consider the characteristics of faculty members that promote positive attitudes to adopt social media to support students' learning.
10. Institutions should modernize the curricula to be compatible with web 2.0 learning technologies.

11. Faculty members should look at social media technologies as aids and supportive tools, not as replacements for traditional classroom instructions and methods.
12. Institutions and faculty members should consider the religious and cultural norms when using social media and the Internet in general in the classrooms, by preparing and designing programs and software. such as downloading videos and clips using download applications instead of directly display them on the Internet in the classrooms, This would help avoid religiously and culturally advertisements, pictures, inappropriate clips, or inappropriate dressing.
13. Institutions should take into consideration students' perspectives regarding which social media could be beneficial used in the learning environments by providing the classrooms with the Internet and computers, smart boards, and display screens so that these tools can be available for use in the learning environments.
14. Faculty should take into consideration the most beneficial social media to support learning from students' perspectives; faculty need to develop their personal learning of social media tools in order to help students benefit from these technologies.

Suggestions for Future Research

Based on the results of this study, several suggestions are offered for future research:

1. This study could be replicated at other Saudi universities to investigate factors and barriers that might affect Saudi students' attitudes toward using social media to support learning;
2. to include other parties in the educational process such as faculty and administrators in order to investigate if there are differences between students, faculty, and administrators in their attitudes and perceptions;
3. to investigate students' gender differences in terms of the barriers they face when they utilize social media for learning in depth, especially their perceptions of privacy and security issues related to the usage of the web-based applications;
4. to focus on male student attitudes toward using social media to support their learning;
5. to conduct a comparative study to find out if there are differences between Saudi students' attitudes toward using social media to support learning at King Abdul-Aziz University and the attitudes of students at any other university in Saudi Arabia;
6. to investigate if there are differences in attitudes, perceptions, factors, and barriers for students from the three different systems: regular, external (Entsab), and distant learners;
7. to understand in depth gender differences in faculty's adoption and integration of social media technologies in their teaching at King Abdul-Aziz University;

8. to explore the negative impacts of social media tools on the learning environments, and how this might affect student learning and academic performance;
9. to explore appropriate professional development that qualify faculty to adopt social media to support students' learning.

Conclusions

The main purpose of this study was to investigate attitudes of Saudi students toward using social media to support their learning at King Abdul-Aziz University. In addition, the study discovered factors that affect the students' attitudes toward using social media for learning as well as barriers that might prevent the students from getting benefits from social media to support their learning. Six social media tools were used in this study: Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype. These particular tools were examined to measure the experience levels of Saudi students at King Abdul-Aziz University with the most common social media technologies.

The current study was conducted at King Abdul-Aziz University, in Saudi Arabia in the fall of 2013. The participants in this study were female and male students at King Abdul-Aziz University. The study sample size was 510 participants. There were 296 female participants who represented 58.04% of the total participants, and 214 male participants who represented 41.96% of the total participants.

The conclusions can be stated as follows:

1. Saudi students at King Abdul-Aziz University have positive attitudes toward using social media to support learning (M= 3.99, SD= .76). The major findings derived from participants' responses were that Saudi students at King

Abdul-Aziz University believe that using social media to support learning is a good idea (M= 4.28, SD= .86), learning online using social media is enjoyable (M=4.11, SD= 1.02), communicating with classmates and instructors using social media is a good learning experience (M= 4.08, SD= .96), and social media tools are important because they support learning (M= 4.07, SD= .93).

2. Of the participants in this study, 99.1% use social media for social communication (M=4.27, SD= .98) and for learning (M= 3.83, SD= .97).
3. The most frequently used tool reported by the participants was WhatsApp (M= 4.60, SD= .88). The next most frequently used tools of social media by the participants were YouTube (M= 4.12, SD= 1.09), Twitter (M= 3.57, SD= 1.42), Wikipedia (M=3.15, SD= 1.25), and Facebook (M=2.89, SD= 1.37). The least frequently used tool of social media technologies by the participants was Skype (M= 2.48, SD= 1.26).
4. Participants did perceive that there were barriers that prevent them from utilizing social media for learning (M=2.62, SD=.55). Of the barriers reported, the most frequently reported was that some of the social media contents can disparage the students' religion (M=4.12, SD=1.11), while the second most common was concerns about privacy and security issues related to the usage of social media (M=3.72, SD=1.19).
5. Only five predictors from the eleven selected variables were significant predictors of the students' attitudes toward using social media to support learning, including perceived ease of use (β=.11, p=.002), perceived usefulness (β=.62, p=.000), subjective norm (β=.13, p= .000), experience with

Skype (β=.07, p=.02), and age (β=.07, p=.02). The strongest predictor of students' attitudes was perceived usefulness (β=.62, p=.00).

6. There was a significant and positive relationship between the overall attitudes of the students and their intentions toward using social media to support their learning (r(508)= .67, p=.00). This correlation means the more positive attitudes participants hold, the more they intend to use social media to support learning.
7. There was no statistically significant differences between Saudi male and female students in their attitudes toward using social media to support learning (t (508)= -.12, p> .05). Both male and female students have positive attitudes toward using social media to support learning. The mean of the attitudes for male students was M=4.00, with SD=0.82; while the mean of attitudes for female students was M= 3.99, with SD=0.71.
8. There was a significant difference between male and female students in the barriers they have encountered when they intend to use social media for learning (with t (508)= -2.96 , *p*<.05). Saudi male students (M=2.69, SD=.51) encountered more barriers when using social media to support learning than female students (M= 2.57, SD=.47).
9. There was a significant relationship between attitudes of students and their behavioral intentions controlling for subjective norm as a mediator, with r=.58, *p*=00).
10. Students' intention to use social media to support learning was significantly related to their actual use of WhatsApp (β = .16, P= .000), Facebook (β = .11,

p=.01), Wikipedia (β = .10, p=.02), YouTube (β =.10, p= .03), and Twitter (β =.077, P=.08). However, students' intention to use social media to support learning was not significantly related to the actual use of Skype (β = -.011, p=.80).

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Appendices

Appendix (A): Human Subject Committee Approval

KU RESEARCH & GRADUATE STUDIES
The University of Kansas

3/12/2013
HSCL #20708
Hanan Aifan
3520 W. 22nd St. #G1
Lawrence, KS

The Human Subjects Committee, Lawrence Campus (HSCL) has received your response to its expedited review of your research project 20708 Aifan/Aust (ELPS) Saudi students' attitudes towards using social media to enhance students' learning, King Abdul Aziz University, Jeddah and approved this project under the expedited procedure provided in 45 CFR 46.110 (f) (7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. As described, the project complies with all requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date. Since your research presents no risk to participants and involves no procedures for which written consent is normally required outside of the research context HSCL may waive the requirement for a signed consent form (45 CFR 46.117 (c) (2). Your information statement meets HSCL requirements. The Office for Human Research Protections requires that your information statement must include the note of HSCL approval and expiration date, which has been entered on the form sent back to you with this approval.

1. At designated intervals until the project is completed, a Project Status Report must be returned to the HSCL office.
2. Any significant change in the experimental procedure as described should be reviewed by this Committee prior to altering the project.
3. Notify HSCL about any new investigators not named in original application. Note that new investigators must take the online tutorial at https://rgs.drupal.ku.edu/human_subjects_compliance_training.
4. Any injury to a subject because of the research procedure must be reported to the Committee immediately.
5. When signed consent documents are required, the primary investigator must retain the signed consent documents for at least three years past completion of the research activity. If you use a signed consent form, provide a copy of the consent form to subjects at the time of consent.
6. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.

Please inform HSCL when this project is terminated. You must also provide HSCL with an annual status report to maintain HSCL approval. Unless renewed, approval lapses one year after approval date. If your project receives funding, which requests an annual update approval, you must request this from HSCL one month prior to the annual update. Thanks for your cooperation. If you have any questions, please contact me.

Sincerely,

Stephanie Dyson Elms
Coordinator
Human Subjects Committee Lawrence
cc: Ronald Aust
Human Subjects Committee Lawrence
Youngberg Hall l 2385 Irving Hill Road l Lawrence, KS 66045 l (785) 864-7429 l
HSCL@ku.edu research.ku.edu

Appendix (B): Consent Form in English

Approved by the Human Subjects Committee University of Kansas, Lawrence Campus (HSCL). Approval expires one year from 3/12/2013. HSCL # 20708

Internet Information Statement

The Department of Communication Studies at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.

We are conducting this study to better understand Saudi's students at King Abdul Aziz University, Jeddah, attitudes towards using social media to develop their learning. This will entail your completion of seven questions. The questionnaire packet is expected to take approximately 15-20 minutes to complete.

The content of the questionnaires should cause no more discomfort than you would experience in your everyday life. Although participation may not benefit you directly, we believe that the information obtained from this study will help us gain a better understanding of Saudi students at King Abdul Aziz University, Jeddah, attitudes towards using social media to develop their learning. Your participation is solicited, although strictly voluntary. Your name will not be associated in any way with the research findings. It is possible, however, with internet communications, that through intent or accident someone other than the intended recipient may see your response.

If you would like additional information concerning this study before or after it is completed, please feel free to contact us by phone or mail.
Completion of the questionnaire indicates your willingness to participate in this project and that you are at least age eighteen. If you have any additional questions about your rights as a research participant, you may call (785) 864-7429, write the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, or email irb@ku.edu.

Sincerely,

Hanan Aifan
Principal Investigator

Department of Educational Leadership and Policy Studies
University of Kansas
Lawrence, KS 66045

(785) 727-9878
hanan@ku.eduaust@ku.edu

Dr. Ronald Aust
Associate Professor

Department of Educational Leadership and Policy Studies
University of Kansas
Lawrence, KS 66045
421 JRP Hall
(785) 864-4458

Appendix (C): Human Subject Committee Approval for faculty Interview

KU RESEARCH & GRADUATE STUDIES
The University of Kansas

4/4/2013

HSCL #20778

Hanan Aifan
3520 W. 22nd St. #G1
Lawrence, KS

The Human Subjects Committee, Lawrence Campus (HSCL) has received your response to its expedited review of your research project
20778 Aifan/Aust (ELPS) Saudi faculty members' attitudes towards using social networks to enhance students' learning, King Abdul Aziz University, Jeddah
and approved this project under the expedited procedure provided in 45 CFR 46.110 (f) (7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. As described, the project complies with all requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.
Since your research presents no risk to participants and involves no procedures for which written consent is normally required outside of the research context HSCL may waive the requirement for a signed consent form (45 CFR 46.117 (c) (2). Your information statement meets HSCL requirements. The Office for Human Research Protections requires that your information statement must include the note of HSCL approval and expiration date, which has been entered on the form sent back to you with this approval.
1. At designated intervals until the project is completed, a Project Status Report must be returned to the HSCL office.
2. Any significant change in the experimental procedure as described should be reviewed by this Committee prior to altering the project.
3. Notify HSCL about any new investigators not named in original application. Note that new investigators must take the online tutorial at https://rgs.drupal.ku.edu/human_subjects_compliance_training.
4. Any injury to a subject because of the research procedure must be reported to the Committee immediately.
5. When signed consent documents are required, the primary investigator must retain the signed consent documents for at least three years past completion of the research activity. If you use a signed consent form, provide a copy of the consent form to subjects at the time of consent.
6. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.

Please inform HSCL when this project is terminated. You must also provide HSCL with an annual status report to maintain HSCL approval. Unless renewed, approval lapses one year after approval date. If your project receives funding which requests an annual update approval, you must request this from HSCL one month prior to the annual update. Thanks for your cooperation. If you have any questions, please contact me.

Sincerely,
Stephanie Dyson Elms

Coordinator
Human Subjects Committee Lawrence
cc: Ronald Aust

Appendix (D): Consent Form for Students and Faculty

Internet Information Statement

Approved by the Human Subjects Committee University of Kansas, Lawrence Campus (HSCL). Approval expires one year from 4/4/2013. HSCL # 20778

The Department of Educational Leadership and Policy Studies at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.

We are conducting this study to better understand Saudi students and instructors at King Abdul Aziz University, Jeddah, attitudes towards using social media to develop students' learning. This will entail your completion of a questionnaire. The questionnaire packet is expected to take approximately 7-10 minutes to complete.

The content of the questionnaires should cause no more discomfort than you would experience in your everyday life. Although participation may not benefit you directly, we believe that the information obtained from this study will help us gain a better understanding of Saudi students and instructors, at King Abdul Aziz University, Jeddah, attitudes towards using social media to develop students' learning. Your participation is solicited, although strictly voluntary. Your name will not be associated in any way with the research findings. It is possible, however, with internet communications, that through intent or accident someone other than the intended recipient may see your response.

If you would like additional information concerning this study before or after it is completed, please feel free to contact us by phone or mail.
Completion of the questionnaire indicates your willingness to participate in this project and that you are at least age eighteen. If you have any additional questions about your rights as a research participant, you may call (785) 864-7429, write the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, or email irb@ku.edu.

Sincerely,

Hanan Aifan

Principal Investigator

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Appendix (E): Approval from King Abdu-Aziz University to Conduct the Study

KINGDOM OF SAUDI ARABIA
Ministry of Higher Education
KING ABDULAZIZ UNIVERSITY
Vice presidency for Graduate Studies & Academic Research
Deanship of Graduate Studies

المملكة العربية السعودية
وزارة التعليم العالي
جامعة الملك عبد العزيز
وكالة الجامعة للدراسات العليا والبحث العلمي
عمادة الدراسات العليا

سعادة وكيل الجامعة للدراسات العليا والبحث العلمي حفظه الله

السلام عليكم ورحمة الله وبركاته..

تقدمت إلينا المبتعثة / جنان بنت احمد عيفان بطلبها المشفوع بخطاب من الملحق الثقافي بالولايات المتحدة الامريكية والتي ترغب بالقيام برحلة عملية وتجميع وتطبيق استبانه و وإجراء مقابلات حيث أن الطالبة مبتعثه إلى جامعة كانسس – (بالولايات المتحدة الامريكية) قسم تقنيات التعليم وترغب بتطبيق بحثها وتجميع معلومات خاصة ببحث التخرج لمرحلة الدكتوراه بعنوان:

"الميول والاتجاهات لدى اعضاء هيئة التدريس والطلاب بجامعة الملك عبد العزيز الى استخدام شبكات التواصل الاجتماعي في التعليم واثر ذلك في زيادة اثر التعلم"

وترغب في تطبيق البحث بالتعاون مع عمادة التعليم الاليكتروني والتعليم عن بعد بجامعة الملك عبد العزيز.

نرى والرأي لسعادتكم انه لا مانع من تطبيق البحث بالجامعة وتخطر الملحقية الثقافية في بالولايات المتحدة الامريكية بالموافقة لإتمام إجراءات القيام بالرحلة العلمية من وزارة التعليم العالي .

وتقبلوا خالص تحياتي وتقديري ؛؛؛

د.عدنان بن سالم الحميدان
عميد الدراسات العليا

صورة لسعادة وكيل العمادة للبرامج والتطوير
صورة لوحدة التقنية و المعلومات (كامل المعاملة)
ط ١٤٣٣/٧/١٩هـ

الرقم: ٧١٥/٢٣/٩٦ التاريخ: ١٤٣٣/٧/٢٠ المشفوعات: كامل المعاملة Encl.:

ص.ب: ٨٠٢١٧ جدة ٢١٥٨٩ ت: ٦٩٥١٢٦٦ / ٦٤٠٠٠٠٠ - ٦١٣٨٧ فاكس: ٠٢ ٦٩٥٢٨٩٦
P.O.Box: 80217 Jeddah 21589 Tel.: 6951266 / 6400000 - 61387 Fax.: 02 6952896

Appendix (F): Students Electronic Survey-English

Saudi Students' Attitudes toward Using Social Media to Support their Learning

Social media are a group of online tools that support people in creating, and sharing ideas in virtual communities. These tools include: Facebook, Twitter, YouTube, WhatsApp and other emerging social media technologies.

Part I: Social Media Usage and Purposes

For each statement, please choose one item that indicates your answer.

A. Do you use social media?

- Yes
- No

B. Below are some purposes people use social media. For each possible purpose, indicate how often YOU use social media.

	Frequency of Use				
	Never	Rarely	Sometimes	Often	Frequently
1- Social communication					
2- News					
3- Learning					
4- Entertainment					
5- Other ____.					

Part II: Examples of Social Media and Networking Sites

A. How often do you use each type of the following social media?

Frequency of Use					
	Never	Rarely	Sometimes	Often	Frequently
1- Social Networks (e.g., Facebook)					
2-Blogs and Microblogging (e.g., Twitter)					
3-Media Sharing (e.g., YouTube)					
4-Text Chat (e.g., WhatsApp)					
5- Wikis (e.g., Wikipedia)					
6- Video Teleconferencing (e.g., Skype)					
7- Other_____.					

Part III: Experience with Social Media

A. How good are you at using these social media tools? Rate the statements with the following scale:

1=No experience; 2= Poor; 3= Average; 4= Somewhat Good; 5= Very Good.

.	Frequency of Use				
	1	2	3	4	5
1- Social Networks (e.g., Facebook)					
2-Blogs and Microblogging (e.g., Twitter)					
3-Media Sharing (e.g., YouTube)					
4- Text Chat (e.g. WhatsApp)					
5- Wikis (e.g., Wikipedia)					
6-Video Teleconferencing (e.g., Skype)					

Part IV: Attitudes toward Using Social Media to Support Learning

A. Have you taken a class where social media were used?

- Yes

- No

B. How often have your instructors used any of the following social media for any of your classes?

Frequency of use					
	Never	Rarely	Sometimes	Often	Frequently
1- Social Networks (e.g., Facebook)					
2-Blogs and Microblogging (e.g., Twitter)					
3-Media Sharing (e.g., YouTube)					
4- Text Chat (e.g., WhatsApp)					
5-Wikis (e.g., Wikipedia)					
6- Video Teleconferencing (e.g., Skype)					
7- Other ___.					

C. To what extent do you agree or disagree with the following statements?

Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5.

Your Agreement					
	1	2	3	4	5
1-I like to use social media for learning purposes.					
2-Social media are important because they support my learning.					
3- In my opinion, using social media to support learning is a good idea.					
4- I find learning online using social media enjoyable.					

5- Using social media for learning is very desirable for me.					
6- I like to engage myself with my classmates in collaborative projects using social media.					
7-Communicating with my classmates and instructors using social media is a good learning experience.					
8- I prefer attending a class where the instructor is using social media in his/her teaching.					
9- Once I started using social media to support my learning, I found it difficult to stop.					

D. **In the last three years, my attitude toward using social media for learning has_____**:

- become significantly more positive.
- become slightly more positive.
- remained the same.
- become slightly more negative.
- become significantly more negative.

Part V: Factors to Use Social Media for Learning Purposes

A. Perceived Ease of Use

To what extent do you agree or disagree with the following statements?

Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5.

Your Agreement					
	1	2	3	4	5
1- I find social media easy to use to support my learning.					
2- I find it takes a lot of effort to become skillful at using social media for learning purposes**.**					
3- I find it is easy to navigate through social media windows.					
4- I find it is easy to post my profile and class projects on the Internet using social media.					
5- Interacting and using social media to support learning requires a lot of mental effort.					
6- My interaction with social media tools and using them for learning purposes is clear and understandable.					

B. Perceived Usefulness.

Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5.

Your Agreement					
	1	2	3	4	5
1- I find many educational resources, links, programs, and topics of discussion when using social media					
2- Social media motivate me to learn better than traditional methods of teaching.					
3- My writing skills develop as I communicate with others using social media.					
4- Watching videos on social media develops my listening skills.					

5- Social media provide me with applications and programs that help me to be more creative in my course projects and assignments.					
6- Debating ideas and exchanging opinions with others through social media enhances my critical thinking skills.					
7- Learning through the Internet using social media reinforces the self- independent learning for me.					
8- I express my opinions and thoughts more freely with social media than in face-to-face discussions with my instructors and classmates in the classroom.					
9- Social media help me to learn collaboratively with those who have similar interests.					
10- I can learn anytime and anywhere using social media.					
11 - Communicating and interacting with my classmates and instructors through social media helps me to improve my social skills					
12- Overall, using social media for learning purposes improves my academic performance.					

C. Social Media in My Community.

Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5.

	Your Agreement				
	1	2	3	4	5
1- Most people who are important to me expect me to use social medial for learning purposes.					
2-Most of my friends and classmates believe that using social media for learning purposes is a wise decision.					
3-Most of my friends and classmates recommend using social media to support learning.					
4-My instructors think that it is important to use social media to support learning.					

D. Using Social Media.

Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5.

	Your Agreement				
	1	2	3	4	5
1-I intend to use social media to support my learning.					
2- I will continue to use social media because they help me to support my learning.					
3- I would recommend that my friends and classmates utilize social media to support their learning.					

Part VI: Social Media and Students' Learning.

Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5.

	Your Agreement				
	1	2	3	4	5
1- I have access to the Internet at home.					
2- I have sufficient experience to use technology.					
3- My parents allow me to use social media.					
4- Some of the social media contents are against my religion.					
5- I am concerned about privacy and security problems related to using social media.					
6- I can understand the social media websites that are in English.					
7- When my instructor uses social media in class, my classmates take the instruction seriously.					
8- Most of my instructors use social media in their teaching.					
9- The university provides students with training programs teaching them how to use social media to support learning.					

10- Activities that require the use of social media in the learning environment are integrated in the university curricula.					

Part VII: Open-Ended Question

A. Do you have other comments or thoughts regarding using social media as an educational tool to support learning?

Part VIII: Demographic Information

A. Please fill out or choose one of the following items.

1. Compared to my parents, I am_____.
   - much more conservative
   - more conservative
   - the same
   - more liberal
   - much more liberal
2. Gender?
   - Female
   - Male
3. Age _____years.
4. What is your major?
   - Science Studies
   - Human Studies
5. What is the academic degree you are currently working toward?
   - Bachelor

- Master's
- PhD

6. Do you have a computer at home?
   - Yes
   - No
7. Do you have any of the smart devices (e.g., iPhone, iPad, Samsung)?
   - Yes
   - No

Thank You for your participation….

Appendix (G): Back Translated Electronic Survey-English

Attitudes of Saudi Students toward Using Social Media to Support their Learning

King Abdul-Aziz University, Jeddah

Social media is a group of online tools that help users to create and share ideas, views and experiences with others in virtual communities. These tools such as: Facebook, Twitter, YouTube, WhatsApp and others.

Part I: Social media Usage and purposes

For each of the following statements, please choose one answer:

A. Do you use social media?

- Yes
- No

B. How often do you use social media to achieve each of the following purposes?

	Frequency				
	Never	Rarely	Sometimes	Often	Always
1-Social communication					
2-News					
3-Learning					
4-Entertainment					
5- Other					

Part II: Examples of Social Media and Social Networks

A. How often do you use each type of the following social media

	Never	Rarely	Sometimes	Often	Always
1-Social Networks (e.g. Facebook)					

2- Blogs & Microblogging (e.g. Twitter)					
3- Media Sharing (e.g. YouTube)					
4- Text Chat (e.g. WhatsApp)					
5- Wikis (e.g. Wikipedia)					
6- Video Teleconferencing (e.g. Skype)					
7-Other					

Part III: Experience with Social Media

A. How good are you in using these social media tools? Rate the statements using the following scale:

1=No experience , 2 = poor experience , 3 =Average, 4=Somewhat Good, 5 =Very Good Experience

	1	2	3	4	5
1-Social Networks (e.g. Facebook)					
2- Blogs & Microblogging (e.g. Twitter)					
3- Media Sharing (e.g. YouTube)					
4- Text Chat (e.g. WhatsApp)					
5- Wikis (e.g. Wikipedia)					
6- Video Teleconferencing (e.g. Skype)					

Part IV: Attitudes toward Using Social Media to support learning

A. Have you taken a class where social media were used?

- Yes
- No

B. How often your instructors use any of the following social media for any of your classes?

	Never	Rarely	Sometimes	Often	Always
1-Social Networks (e.g. Facebook)					
2- Blogs & Microblogging (e.g. Twitter)					
3- Media Sharing (e.g. YouTube)					
4- Text Chat (e.g. WhatsApp)					
5- Wikis (e.g. Wikipedia)					
6- Video Teleconferencing (e.g. Skype)					
7-Other					

C. To what extent do you agree or disagree with each of the following statements:1=Strongly disagree,2= Disagree, 3 =Neutral, 4 =Agree, 5= Strongly Agree

	1	2	3	4	5
1-I prefer to use social media for learning purposes.					
2- Social media are important because they help me in learning support.					
3- In my opinion, using social media to support learning is a good idea.					
4- I find learning online through using social media is fun.					
5- I find using social media for learning is very desirable for me.					

6- I prefer to join classmates in collaborative projects using social media.					
7- Communicating with my classmates and instructors using social media provides me with good learning experiences.					
8- I prefer to attend a class where the instructor is using the social media in his/her teaching.					
9- When I started using the social media to support learning, I found it difficult to stop it.					

D. In the last three years, my attitude toward the use of social media to support learning has_____:

- become significantly more positive
- become slightly more positive
- not changed remained as it is
- became slightly more negative
- become significantly more negative

Part V: Factors to Use Social Media for learning purposes

A. Perceived Ease of Use

To what extent do you agree or disagree with the following statements?

1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree.

	1	2	3	4	5
1- I find social media easy to use to support my learning.					
2- I find I need a great effort to become skillful in the use of social media for learning purposes.					
3- I find it is easy to navigate through social media windows.					
4-I find it easy to post my files and my projects online by using social media.					
5- Interacting with social media and use them to support learning requires a lot of mental effort.					

6- My Interaction with social media tools and using them for learning purposes is clear and understandable.					

B- Perceived Usefulness Social Media.

1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

	1	2	3	4	5
1- I find many educational resources, links and programs and topics of discussion when I use social media.					
2- Social media encourage me to learn better than traditional teaching methods.					
3- My writing skills develop when I communicate with others through social media.					
4- Watching videos through social media develops my listening skills.					
5- Applications and programs provided by social media help me to be more creative in my projects and assignments.					
6- Discussing and exchanging views with others using social media develops my critical thinking skills.					
7- learning online through social media enhances the self – independent learning I have.					
8- I express my opinions and thoughts more freely through social media than in face-to-face discussions with my instructors and classmates in the classroom.					
9- Social media help me to learn collaboratively with others who have the same interests.					
10- I can learn anytime and anywhere using social media.					
11- Communicating and interacting with my classmates and instructors through the social media helps me develop my social skills.					
12- In general, the use of social media for learning purposes develops my academic performance.					

C.The Social Media in the Community.

1=Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

	1	2	3	4	5
1. Most people important to me are expecting that I use social media for learning purposes.					

2- Most of my friends and classmates believe that the use of social media for learning purposes is a wise decision.					
3-Most of my friends and classmates recommend using the social media to support learning.					
4-My instructors think that it is important to use the social media to support learning.					

D.Using Social Media

1=Strongly Disagree, 2=Disagree, 3=Neutral, 4= Agree, 5= Strongly Agree.

	1	2	3	4	5
1- I intend to use social media to support my learning.					
2-I will continue to use social media because they help me in supporting my learning.					
3-I would recommend my friends and classmates to use social media to enhance their learning.					

Part VI: Social Media and Students' learning

To what extent do you agree or disagree with each of the following statements:

1=Strongly Disagree, 2=Disagree, 3-=Neutral, 4=Agree, 5=Strongly Agree.

	1	2	3	4	5
1- Internet connection is available at my house.					
2- I possess sufficient experience in the use of technology.					
3-My parents allow me to use social media.					
4-Some of the contents of social media contain religious offenses.					
5- The privacy and security problems related to using social media. are concerning me					
6- I can understand the social media websites, which are in the English.					
7- When my instructor uses social media in the classroom, my classmates interact with the instruction seriously.					
8- Most of my instructors use social media in their teaching.					

9- The University provides training programs for students to teach them how to use social media effectively to support their learning.					
10- The university curricula involve activities that require the use of social media in the learning environment.					

Part VII: Open-ended question

A. Do you have other comments or thoughts regarding the use of social media as educational tools to support learning?

Part VIII: Demographic Information

A. Please fill out or choose one of the following items.

1. Compared to my parents, I am _____ .
    - much more conservative
    - more conservative
    - at the same level
    - more liberal
    - much more liberal
2. Gender:
    - Female
    - Male
3. Age _____ Years.
4. What is your major
    - Science Studies
    - Human Studies

5. What is your academic degree you are currently working for?
    - Bachelor
    - Master's
    - PhD
6. Do you have a computer at your home?
    - Yes
    - No
7. Do you own any of the smart devices (e.g., iPhone, iPad , Samsung , etc?
    - Yes
    - No

Appendix (H): Students Electronic Survey –Arabic

مواقف واتجاهات الطلاب والطالبات السعوديين من استخدام وسائل التواصل الاجتماعية لتدعيم التعلم لديهم.

جامعة الملك عبدالعزيز, جدة

وسائل التواصل الاجتماعية هي مجموعة من ادوات الانترنت التي تساعد مستخدميها على تكوين الافكار،وتبادل الآراء والخبرات مع الاخرين في مجتمعات افتراضية .من الامثله على بعض من هذه الادوات مواقع الشبكات الاجتماعية مثل الفيسبوك، تويتر،يوتيوب،واتساب وغيرها.

الجزءالاول:وسائل التواصل الاجتماعية استخدامها واغراض الاستخدام.

لكل من العبارات التالية،الرجاءاختياراجابة واحدة:

ا -هل تستخدم وسائل التواصل الاجتماعية؟

- نعم
- لا

ب -كم غالبا تستخدم وسائل التواصل الاجتماعية لتحقيق كل من الاهداف التالية؟

تكرارالاستخدام					
دائما	غالبا	احيانا	نادرا	ابدالم استخدمها	
					١ -التواصل الاجتماعي
					٢ -الاخبار
					٣ -التعلم
					٤ -الترفيه والتسلية
					٥ -اخرى ــــــــ.

الجزءالثاني : أمثلةعلى وسائل تواصل وشبكات اجتماعية

أ- كم غالبا تستخدم كل نوع من وسائل التواصل الاجتماعية التالية:

تكرار الاستخدام					
دائما	غالبا	احيانا	نادرا	ابدا لم استخدمها	
					١- مواقع الشبكات الاجتماعية،مثل الفيسبوك (Facebook)
					٢- المدونات(Blogs)، مثل تويتر(Twitter)
					٣- الاعلام المشترك،مثل يوتيوب (**YouTube**)
					٤- الدردشة النصية،مثل الواتساب (**WhatsApp**)
					٥- الويكي، مثل الويكيبيديا (**Wikipedia**)
					٦- محادثات الفيديو، مثل السكايبي (Skype)
					٧- اخرى_____.

الجزالثالث:الخبرة في استخدام وسائل التواصل الاجتماعية

أ- حدد مدى خبرتك في استخدام وسائل التواصل الاجتماعية عن طريق الاجابة على العبارات التالية باستخدام المقياس التالي:

١=لاتوجد خبرة، ٢=خبرة قليلة، ٣=خبرة متوسطة، ٤=خبرة جيدة، ٥=خبرة كبيرة

مستوى الخبرة					
٥	٤	٣	٢	١	
					١- مواقع الشبكات الاجتماعية،مثل الفيسبوك(**Facebook**)
					٢- المدونات (Blogs) ، مثل تويتر(Twitter)
					٣- الاعلام المشترك،مثل يوتيوب (**YouTube**)
					٤- الدردشة النصية،مثل الواتساب(**WhatsApp**)
					٥- الويكي، مثل الويكيبيديا(**Wikipedia**)

					٦ـ محادثات الفيديو، مثل السكايبي(**Skype**)

الجزءالرابع: مواقف الطلاب والطالبات السعوديين من استخدام وسائل التواصل الاجتماعية لتدعيم التعلم

ا ـهل سبق لك دراسة مقرر تم فيه استخدام وسائل التواصل الاجتماعية؟

نعم

لا

ب ـ من خلال دراستك لهذا الفصل الدراسي،أي من وسائل التواصل الاجتماعية التالية يتم استخدامها من قبل أحد أعضاء هيئة التدريس؟

تكرارالاستخدام					
دائما	غالبا	احيانا	نادرا	ابدا لم يستخدمها	
					١ـ مواقع الشبكات الاجتماعية،مثل الفيسبوك (**Facebook**)
					٢ـ المدونات (**Blogs**)، مثل تويتر(**Twitter**)
					٣ـالاعلام المشترك،مثل يوتيوب (**YouTube**)
					٤ـالدردشة النصية،مثل الواتساب(**WhatsApp**)
					٥ـالويكي، مثل الويكيبيديا(**Wikipedia**)
					٦ـ محادثات الفيديو، مثل السكايبي (Skype)
					٧ـ اخرى_____.

جـ الى اي مدى تتفق اوتختلف مع كل من العبارات التالية:

غيرموافق بشدة= ١،غيرموافق=٢،محايد=٣،موافق =٤،موافق بشدة=٥

درجةالموافقة					
٥	٤	٣	٢	١	
					١ ـافضل استخدام وسائل التواصل الاجتماعية لاغراض تعليمية.

					٢ -وسائل التواصل الاجتماعية مهمة لانها تساعدني في تطويرتعلمي.
					٣- في رأي، أن استخدام وسائل التواصل الاجتماعية لتدعيم التعلم فكرة جيدة.
					٤ -أجد التعلم عبرالإنترنت باستخدام وسائل التواصل الاجتماعية ممتع.
					٥- استخدام وسائل التواصل الاجتماعية في التعلم أمر محبب جدا لدي.
					٦- أفضل أن اشارك زملاء الدراسة في مشاريع دراسية تعاونية باستخدام وسائل التواصل الاجتماعية.
					٧- التواصل مع زملاء الدراسة وأعضاء هيئة التدريس باستخدام وسائل التواصل الاجتماعية يكسبني خبرة تعليمية جيدة.
					٨- أفضل الحضور في قاعة الصف الدراسي التي يستخدم فيها الأستاذ وسائل التواصل الاجتماعية في التدريس.
					٩- عندما بدأت باستخدام وسائل التواصل الاجتماعية لتدعيم تعلمي، وجدت من الصعوبة التوقف عن استخدامها.

د- -في الثلاث السنوات الاخيرة، توجهاتي في استخدام وسائل التواصل الاجتماعية لتدعيم التعلم :

- اصبحت اكثرايجابية بدرجة كبيرة
- اصبحت ايجابية بدرجة قليلة
- لم تتغير بقيت كماهي
- اصبحت سلبية بدرجة قليلة
- اصبحت اكثرسلبية بدرجة كبيرة

الجزء الخامس: عوامل استخدام وسائل التواصل الاجتماعية في التعلم

أ- الى اي مدى تتفق اوتختلف مع كل من العبارات التالية:

غيرموافق بشدة =١،غيرموافق=٢،محايد=٣،موافق=٤،موافق بشدة=٥

أ- سهولة الاستخدام

درجةالموافقة					
٥	٤	٣	٢	١	
					١ -أجد وسائل التواصل الاجتماعية سهلة الاستخدام لتدعيم تعلمي.

					٢-أجد اني أحتاج الى مجهود كبير حتى أصبح ماهرفي استخدام وسائل التواصل الاجتماعية لاغراض تعليمية.
					٣ -أجد من السهل التنقل عبر نوافذ وسائل التواصل الاجتماعية.
					٤ -أجد من السهل نشرملفاتي ومشاريعي الدراسية عبر الانترنت باستخدام وسائل التواصل الاجتماعية.
					٥- التفاعل مع وسائل التواصل الاجتماعية واستخدامها لتدعيم التعلم يتطلب الكثير من الجهد الذهني.
					٦-تفاعلي مع وسائل التواصل الاجتماعية واستخدامي لها لاغراض تعليمية واضح ومفهوم.

ب ـ الفوائد المتلقاه من وسائل التواصل الاجتماعية

درجةالموافقة					
٥	٤	٣	٢	١	
					١- أجد العديد من المصادر التعليمية والروابط والبرامج ومواضيع النقاش عند استخدام وسائل التواصل الاجتماعية.
					٢- تحفزني وسائل التواصل الاجتماعية للتعلم بشكل افضل من طرق التدريس التقليدية.
					٣- تتطورمهارة الكتابة لدي عند التواصل مع الاخرين عبروسائل التواصل الاجتماعية.
					٤ - مشاهدة مقاطع الفيديوعبروسائل التواصل الاجتماعية يطورمهارة الاستماع لدي.
					٥-التطبيقات والبرامج التي توفرها وسائل التواصل الاجتماعية تساعدني على أن أكون أكثرابداعا في تصميم وعمل المشاريع والواجبات الدراسية.
					٦ – تتطورلدي مهارات التفكيرالنقدي عند مناقشة وتبادل الاراء مع الاخرين باستخدام وسائل التواصل الاجتماعية.
					٧-التعلم عبر الانترنت من خلال وسائل التواصل الاجتماعية يعززالتعلم الذاتي لدي.
					٨- أعبر عن آرائي وأفكاري بحرية من خلال وسائل التواصل الاجتماعية أكثرمن النقاش وجها لوجه مع أساتذتي وزملائى في الصف الدراسي.

٩ -تساعدني وسائل التواصل الاجتماعية في تطويرتعلمي بشكل تعاوني مع الاخرين الذين لديهم نفس الاهتمامات.					
١٠- أستطيع التعلم في أي وقت وفي أي مكان باستخدام وسائل التواصل الاجتماعية.					
١١ -التواصل والتفاعل مع زملائي في الصف الدراسي وأساتذتي من خلال وسائل التواصل الاجتماعية يساعدني في تطويرمهاراتي الاجتماعية.					
١٢– بشكل عام، استخدام وسائل التواصل الاجتماعية لأغراض تعليمية يطور آدائي الأكاديمي.					

ج- وسائل التواصل الاجتماعية في مجتمعي

درجةالموافقة					
٥	٤	٣	٢	١	
					١ - معظم الناس المهمين بالنسبة لي يتوقعون بأني أستخدم وسائل التواصل الاجتماعية لأغراض تعليمية.
					٢ - معظم أصدقائي وزملاء الصف الدراسي يؤمنون بأن استخدام وسائل التواصل الاجتماعية لأغراض تعليمية قرار حكيم .
					٣ - معظم أصدقائي وزملاء الصف الدراسي يوصون باستخدام وسائل التواصل الاجتماعية لتدعيم التعلم.
					٤- يعتقد أساتذتي أنه من المهم استخدام وسائل التواصل الاجتماعية لتدعيم التعلم.

د- استخدام وسائل التواصل الاجتماعية

درجةالموافقة					
٥	٤	٣	٢	١	
					١ -أنوي استخدام وسائل التواصل الاجتماعية لتدعيم تعلمي.
					٢ - سوف أستمر في استخدام وسائل التواصل الاجتماعية لانها تساعدني في تدعيم تعلمي .

					٣ - أوصي أصدقائي وزملائى في الصف الدراسي بالأنتفاع من وسائل التواصل الاجتماعية لتدعيم التعلم لديهم.

الجزء السادس: وسائل التواصل الاجتماعية والتعلم.

أ- الى اي مدى تتفق اوتختلف مع كل من العبارات التالية:

غيرموافق بشدة =١،غيرموافق=٢،محايد=٣،موافق=٤،موافق بشدة=٥

درجةالموافقة					
٥	٤	٣	٢	١	
					١- الاتصال بالانترنت متوفرفي منزلي.
					٢ -أمتلك خبرة كافية في استخدام التكنولوجيا.
					٣- والداي يسمحان لي باستخدام وسائل التواصل الاجتماعية.
					٤ - بعض محتويات وسائل التواصل الاجتماعية تحتوي على مخالفات دينية.
					٥ - تقلقني مشاكل الخصوصية والسرية المتعلقة باستخدام وسائل التواصل الاجتماعية.
					٦- أستطيع فهم مواقع وشبكات التواصل الاجتماعية التي باللغة الانجليزية.
					٧- عندما يستخدم أستاذي وسائل التواصل الاجتماعية في قاعة الصف الدراسي، زملائي يتفاعلون بجدية مع الدرس.
					٨ - معظم أساتذتي يستخدمون وسائل التواصل الاجتماعية في التدريس.
					٩- توفرالجامعة برامج تدريبية للطلاب لتدريسهم كيفية استخدام وسائل التواصل الاجتماعية لتدعيم تعلمهم.
					١٠ - المناهج الدراسية تحتوي على انشطة تتطلب استخدام وسائل التواصل الاجتماعية في بيئة التعلم.

الجزء السابع: سؤال مفتوح

ا- هل لديك أي اضافات أو آراء اخرى متعلقة باستخدام وسائل التواصل الاجتماعية كوسيلة تعليمية لتطويرالتعلم؟

_____.

الجزءالثامن :البيانات الشخصية

الرجاءالاجابة على الاسئلة التالية امابملأ الفراغ أواختياراحد من الخيارات.

١- مقارنة بوالدي، انا_____.

- محافظ أكثر بكثير
- محافظ أكثر
- في نفس المستوى
- أكثر انفتاحا
- أكثر انفتاحا بكثير

٢- الجنس:

- أنثى
- ذكر

٣ -العمر؟ _____سنة.

٤ -التخصص؟

- علمي
- أدبي

٥ -الدرجة اللأكاديمية التي تسعى للحصول عليها الان ؟

- بكالوريوس
- ماجستير

- دكتوراه

٧- هل تمتلك جهاز كمبيوتر في منزلك؟

- نعم
- لا

٨- هل تمتلك اي جهاز من الاجهزة الذكية (مثلا: ايفون, أيباد, سامسونج...الخ)؟

- نعم
- لا

شكرا لاستجابتك للاستبانة.....

Appendix (I): Students' online interview Questions

Saudi Students' Attitudes toward Using Social Media to Enhance their Learning_ Interview

Part I: Demographic Information

1-What is your age? _____Years.

2- What is your gender?

- Male
- Female

3- What is your major? _____.

4-What is the academic degree you are working toward now?

- Bachelor
- Master's
- PhD

5-What is your current academic status?

- Regular
- External
- Distant learner

Part II: Social media and learning

1-Do you use social media?_____.

- For what purposes are you using these tools?_____.

2-How do you define social media? _____.

3-Do you think that social media improve your learning? _____.

- Can you specify some learning skills that social media have helped you to enhance? _____.

4-What are some benefits that social media provide you with? _____.

5-What are some factors that encourage you to use social media in general and specifically to enhance your learning? _____.

6-What are some barriers that face you when attempting to utilize social media to support your learning? _____.

7-Do you think that social media have changed Saudi students' learning culture? Why or why not? How? _____.

Appendix (J): Instructors' Interview Questions

Saudi Instructors' Attitude Toward Using Social Media to Support Students' Learning- Interview

Would you mind answering the following questions, please?

Part I: Demographic Information

1-Gender _____.

2-What is your Age? _____.years

3-What is your Academic Degree? _____.

4-How many years have you taught? _____Years of Experiences.

5-What is your Content area? _____.

Part II: Social Media usage and Purposes

1-Do you use social media tools? For what purposes are you using them?_____.

2-Can you give examples of social media that you are using or visiting?_____.

3-How would you define social media?_____.

Part III: Social Media and Saudi Education and Learning Culture

1-Do you think social media have brought about changes in Saudi culture in general and educational culture in particular? Why or why not? _____.

2-How have social media changed the culture of Saudi education?

_____.

3-Do you think that social media have brought some benefits to Saudi educational culture? why or why not? _____.

4-Do you think that social media have effective roles in developing Saudi students' learning? Why do you think so or why you don't think so? _____.

5- Are you using and incorporating social media into your teaching environments?

- How did the students interact with such tools? _____.
- Do you think using these tools improve students' learning skills?_____.
- Can you specify some learning skills that social media have developed or helped you to develop in your students? _____.

6-What are some reasons that encourage you to use social media in your teaching environments? _____.

7-How can we as educators help and encourage our students to utilize social media effectively to enhance their learning? _____.

8-Can you suggest some methods that help the instructors to apply social media effectively into their teaching environments to help students support their learning?

9-How can the instructor develop her or his personal learning about social media and how he/she can use them effectively in their teaching methods to improve students' learning?

Part IV: Online Learning Environments and Social Media

1-Do you teach distant learning students? _____.

2-What are some tools that you are using when communicating with them?_____.

3-Do you use social media to interact with or help them to develop their learning? why or why not? _____.

4-Compare to in class students: do you prefer to use social media with distant and external students or with in class students? Why or why not? _____.

Part V: Barriers to Utilizing Social Media

1-What are some barriers that face Saudi instructors at King Abdul Aziz University when using social media to help students supporting their learning? _____.

2-In your opinion, what are some difficulties that face Saudi students when utilizing social media to enhance their learning? _____.

3-Is English a barrier facing Saudi instructors or students when utilizing social media effectively to support learning? _____.

Part VI: The Future of Learning and Social Media

1-What will be the future of Saudi students' learning in the continuous usage of social media? _____.

2-Do you think Saudi students' utilization of social media will continue to increase in the future? _____.

3-Do you think that Saudi instructors' integration of social media into their teaching environments will increase in the future? Why or why not? _____.

4-What are some advantages and disadvantages that social media will bring to Saudi students' learning culture in the future? _____.

5-What are some learning skills that you are concerned about with students' continuous usage of social media in the future? _____.

Thank you for your responses……